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CHARACTERISTICS OF SUCCESSFUL OPERATIONAL MANEUVER

A thesis presented to the Faculty of the U. S. Army  
Command and General Staff College in partial  
fulfillment of the requirements for the  
degree



MASTER OF MILITARY ART AND SCIENCE

by

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B.S., United States Military Academy, West Point New York, 1980

Fort Leavenworth, Kansas  
1991

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REPORT DOCUMENTATION PAGE			Form Approved OMB No. 0704-0188	
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1. AGENCY USE ONLY (Leave blank)	2. REPORT DATE 7 June 1991	3. REPORT TYPE AND DATES COVERED Master's Thesis Aug 90 - Jun 91		
4. TITLE AND SUBTITLE Characteristics of Successful Operational Maneuver		5. FUNDING NUMBERS		
6. AUTHOR(S) CPT(P) Joseph L. Votel				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) United States Army Command and General Staff College ATTN: ATZL-SWD-GD Fort Leavenworth, Kansas 66027-6900		8. PERFORMING ORGANIZATION REPORT NUMBER		
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)		10. SPONSORING/MONITORING AGENCY REPORT NUMBER		
11. SUPPLEMENTARY NOTES				
12a. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution is unlimited.		12b. DISTRIBUTION CODE A		
13. ABSTRACT (Maximum 200 words) <p>This thesis explores the topic of operational maneuver by addressing the following research question: What are the characteristics of successful operational maneuver?</p> <p>The thesis uses a combination of descriptive research and case studies to answer the question. First, it uses descriptive research to analyze current AirLand Battle doctrine to identify potential characteristics of successful operational maneuver. The analysis of doctrine reveals two characteristics, mass and offensive action, for further examination. Second, the thesis uses case study analysis to examine mass and offensive action in four case studies.</p> <p>The thesis concludes that mass and offensive action are the primary characteristics of operational maneuver. Their development in operational art depends, however, on the existence of corollary concepts that assist in overall development of the characteristic.</p> <p>The thesis identifies two generalizations that will influence future operational maneuver. They are political influence and leadership.</p>				
14. SUBJECT TERMS Operational Art, Operational maneuver, Operations, Maneuver, Mass, Offensive Action, AirLand Battle, Principles of War, Tactics, Operational leadership.		15. NUMBER OF PAGES 253		16. PRICE CODE
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT UL	

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MASTER OF MILITARY ART AND SCIENCE

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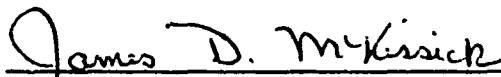
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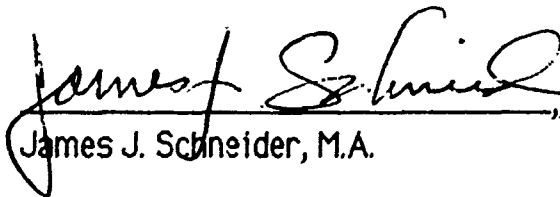
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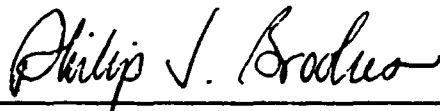
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## ABSTRACT

### CHARACTERISTICS OF SUCCESSFUL OPERATIONAL MANEUVER by CPT(P)

Joseph L. Votel, USA, 253 pages.

This thesis explores the topic of operational maneuver by addressing the following research question: What are the characteristics of successful operational maneuver?

The thesis uses a combination of descriptive research and case studies to answer the question. First, it uses descriptive research to analyze current AirLand Battle doctrine to identify potential characteristics of successful operational maneuver. The analysis of doctrine reveals two characteristics, mass and offensive action, for further examination. Second, the thesis uses case study analysis to examine mass and offensive action in four operational case studies.

The thesis concludes that mass and offensive action are the primary characteristics of operational maneuver. Their development in operational art depends, however, on the existence of corollary concepts that assist in overall development of the characteristic.

While not specifically written to evaluate current doctrine for operational maneuver, the thesis identifies three areas that may require additional illumination in future doctrine. These areas are surprise, mobility, and distribution of forces.

Finally, the thesis identifies two particular generalizations that will influence future operational maneuver. These generalizations are political influence and operational leadership.

## ACKNOWLEDGEMENTS

I am indebted to a number of people who have directly or indirectly influenced me in the completion of this paper. I am grateful for the assistance provided by the great professionals in the Combined Arms Library. In particular, Ms. Alice M. King, assisted by obtaining permission for several copyright reprints at the eleventh hour.

I also wish to express thanks to my thesis committee for their constant and timely guidance.

This thesis is dedicated to Michele, Scott, and Nicholas who put up with the long hours, frustration, and loss of family time. I am forever indebted to them for their constant support and understanding.

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## CHAPTER 1

### INTRODUCTION

"It is the aim of every commander to concentrate all available combat power against the enemy at just the right place to win battles, campaigns, and wars."

William E. DePuy

#### Chapter Overview

This chapter introduces the research question and discusses background information. Of particular importance, this chapter will address the historical precedence and significance of operational maneuver. Finally, this chapter will specify the parameters and methodology for conducting the study.



### Research Question

This thesis investigates the specific topic area of operational maneuver. The research question is; **What are the characteristics of successful operational maneuver?**

### Purpose

The purpose of this thesis is to use current US Army doctrine and historical case studies to identify the characteristics of successful operational maneuver.

The significance of this study is that it will validate existing operational maneuver characteristics derived from current doctrine and identify any additional characteristics not addressed in doctrine. The identification and validation of these characteristics will allow for making generalizations about operational maneuver in the future.

## Thesis Organization

The five chapters of this thesis are:

Chapter 1 - Introduction

Chapter 2 - Survey of Literature

Chapter 3 - US Army Doctrine for Operational Maneuver

Chapter 4 - Case Studies

Chapter 5 - Summary, Conclusions, and Generalizations

In the introduction, (this chapter), I will focus on three general areas. First, I will establish why it is necessary for contemporary military officers to study the concepts of operational maneuver. Second, I will briefly highlight the historical relevance of operational maneuver and why it remains a valid concept in our doctrine. Finally, I will discuss the research methodology to include parameters (assumptions, definitions, and delimitation) for the thesis.

Chapter two consists of a literature survey to outline and assess the sources that contributed to the thesis. I will address specific works that provided significant input in detail. A complete list of all sources used

is in the bibliography.

Chapter three is a detailed analysis of AirLand Battle Doctrine with the objective of deducing characteristics of successful operational maneuver.

Historical case studies in chapter four will analyze the validity of the characteristics deduced in chapter three. The case studies will present variance in forces, doctrine, environments, and operational outcome.

Chapter five will summarize the analysis of case studies and propose generalizations about operational maneuver for the future.

### Methodology

The overall methodology for this thesis will consist of two closely related methods. First, I will use descriptive research to analyze current Army doctrine to identify characteristics of successful operational maneuver. Second, I will use case studies to test the validity of characteristics identified from doctrinal analysis.

In describing descriptive research, Julian L. Simon states that it, "... provides clues for subsequent research to pin down and generalize." 1

The descriptive research in this thesis focuses primarily on deducing characteristics of successful operational maneuver from an analysis of doctrine. This research method requires that I establish a system for determining what constitutes a characteristic of operational maneuver.

The subjectivity and broad range of opinion on this topic make it particularly difficult to use precise finite criteria for deducing and proposing characteristics of operational maneuver. For this reason I choose to use screening criteria which provide a flexible, yet academic, selection method for characteristics. I will use the following screening criteria:

1. Characteristics must be significant; they must be notable or valuable. In conjunction with being significant, the characteristic must also be synergistic. This means it is capable of incorporating other propositions or deductions [referred to as corollaries in this thesis]. 2

2. Characteristics must produce an effect on the enemy center of gravity. Because our doctrine is a "maneuver" doctrine oriented on the

enemy, it follows that operational maneuver must incorporate traits of that doctrine.

3. Characteristics must be supportable by the Principles of War.

4. Characteristics must demonstrate an enduring quality. Historical examples or case studies should demonstrate their validity over time.

After identifying the characteristics of successful operational maneuver, I will use the case study method to determine enduring validity. Case studies used in this thesis will consist of large unit combat actions occurring since World War II. Analysis of case studies will be by an abbreviated and modified form of the Campaign Methodology format developed by the Combat Studies Institute (CSI) at Ft Leavenworth.

## Relevance of the Study

Operational maneuver is a valid and pertinent subject for close study. Recent events in the Persian Gulf illuminate the need for discussion of topics dealing with the employment of large forces, especially in offensive operations. The large forces employed in Operation Desert Storm, not seen since the Korean War, is intriguing to the professional military practitioner. The need for a discussion of operational maneuver has never been greater.

The emergent nature and relative lack of published doctrinal guidance, a challenging world situation, and the proposed reduction of forces require that Army leaders study operational maneuver. Our ability to win battles of the future cannot rely on endless supplies, numerical superiority, and a consistent technological advantage. It will, however, be dependent on our ability to maneuver forces, accept risks, and concentrate our strengths on enemy weaknesses. <sup>3</sup> Understanding the characteristics that make operational maneuver successful will assist commanders and

staff officers, division through army group level, in applying combat power at the right place and time.

There are three broad reasons for studying operational maneuver. First, operational maneuver, as an element of operational art, is a relatively new concept in our doctrine. Second, there is a general lack of operational expertise in our army. Finally, operational maneuver is the central feature of operational art and deserves the primary focus.

Operational art, the level of war which encompasses operational maneuver, was absent from U.S. Army doctrine for approximately 30 years until its re-introduction in 1982.<sup>4</sup> Despite nearly ten years of instruction in our schools, as well as a plethora of articles and books, our officer corps and army has difficulty understanding the concept of operational maneuver and its attendant characteristics and attributes. No statistical data exists to support this claim. However, a number of scholarly articles written since 1982 support this assertion.<sup>5</sup> Additionally, there are no longer officers on active duty who have the experience of operational warfare conducted on the scales seen in World War II (W'WII) or Korea.

A second reason for studying operational maneuver stems from our general lack of operational expertise. In an article in Military Review, LTC Scott A. Marcy, correctly describes the current perception throughout our army that operational art is tactics on a larger scale or strategy on a lower scale. 6 FM 100-5, Operations, our capstone doctrinal manual clearly defines operational art. It states:

Operational art is the employment of military forces to attain strategic goals in a theater of operations through the design, organization, and conduct of campaigns and major operations. 7

Given this fairly definitive description of operational art, why do we have difficulty understanding its attendant concept of operational maneuver? Charles Andrew Willoughby suggests a reason in his book Maneuver in War. In a brief discussion of military instruction and texts, he states, "The military have a professional tendency toward the dogmatic; they bridle at persuasion when coercion is so much simpler." 8 Perhaps Willoughby recognized in 1939 what we are experiencing today. Specifically, there is great difficulty in changing a generation of army



officers instructed and experienced in tactics and procedures quite different from our current AirLand Battle doctrine. This difficulty increases when we add a level to the art of war (the operational level) that was largely absent for 30 years.

Contributing to this problem is the perception that US Army officers think primarily at the tactical level and not the operational level. This is a reasonable perception since the majority of our officers serve their entire careers in tactical organizations which do not require them to think at the operational level. The Goldwater-Nichols Department of Defense Reorganization Act of 1986 mandated the need for service in "joint" headquarters, the primary domain of operational practice. <sup>9</sup> Previous to this, officers progressing through the ranks avoided duty at these headquarters.

Despite indicators showing a lack of operational expertise, the need for officers with operational experience and training has never been greater.

Finally, the best reason for studying operational maneuver is that it is the key concept of operational art. Without it, we lack the ability to

synchronize and employ the military element of power to accomplish the aims of national and theater strategy. In a maneuver doctrine, as AirLand Battle contends to be;

"... maneuver is the ultimate tactical, operational and strategic goal...to break the spirit and will of the opposing high command by creating unexpected and unfavorable operational or strategic situations ...." 10

### Development of Operational Maneuver Concepts

Throughout the history of warfare, various battles and leaders have always highlighted the superior aspects of maneuver. It is significant that the lessons of these places and people have withstood time and are as relevant today as they were then.

The importance and decisiveness of maneuver were obvious at the Battle of Cannae in 216 B.C. In this battle, a force of 50,000 Carthaginians defeated a force of 72,000 Romans through careful movement and positioning of forces in relation to the enemy. (See fig. 1)

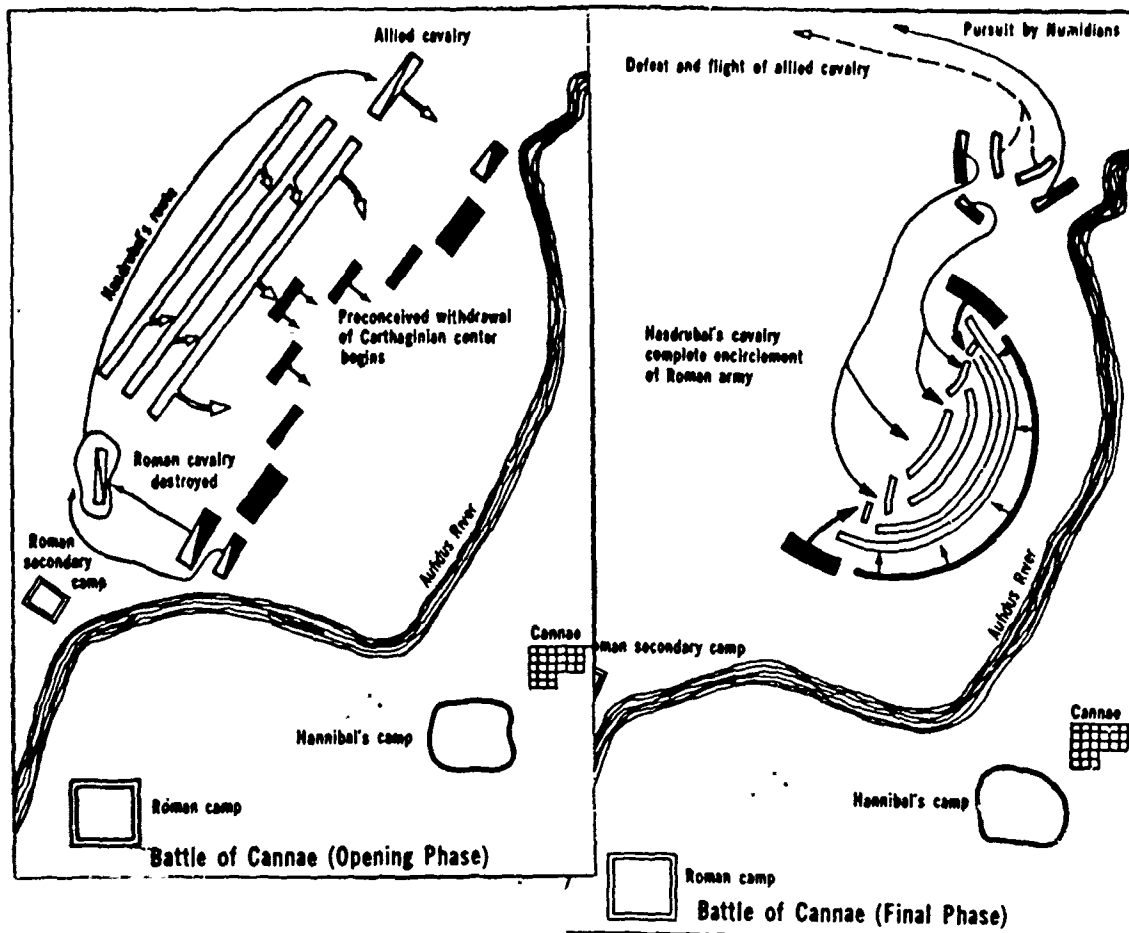


Figure 1, The Battle of Cannae 11

The end result was a complete and total annihilation of the Roman Army. The lessons of Cannae are multiple. The importance of risk-taking, bold action, and concentration at enemy weaknesses are evident.

Napoleon's contribution to the art of warfare, and especially to maneuver, is astounding. He foresaw how marching, maneuvering, fighting, and pursuing combined in one process to defeat the enemy. 12

Napoleon recognized that organizing his forces into corps provided him the freedom of action to execute strategic movements to threaten his enemy. He then concentrated his corps in a manner that allowed his subordinate commanders to be victorious. 13

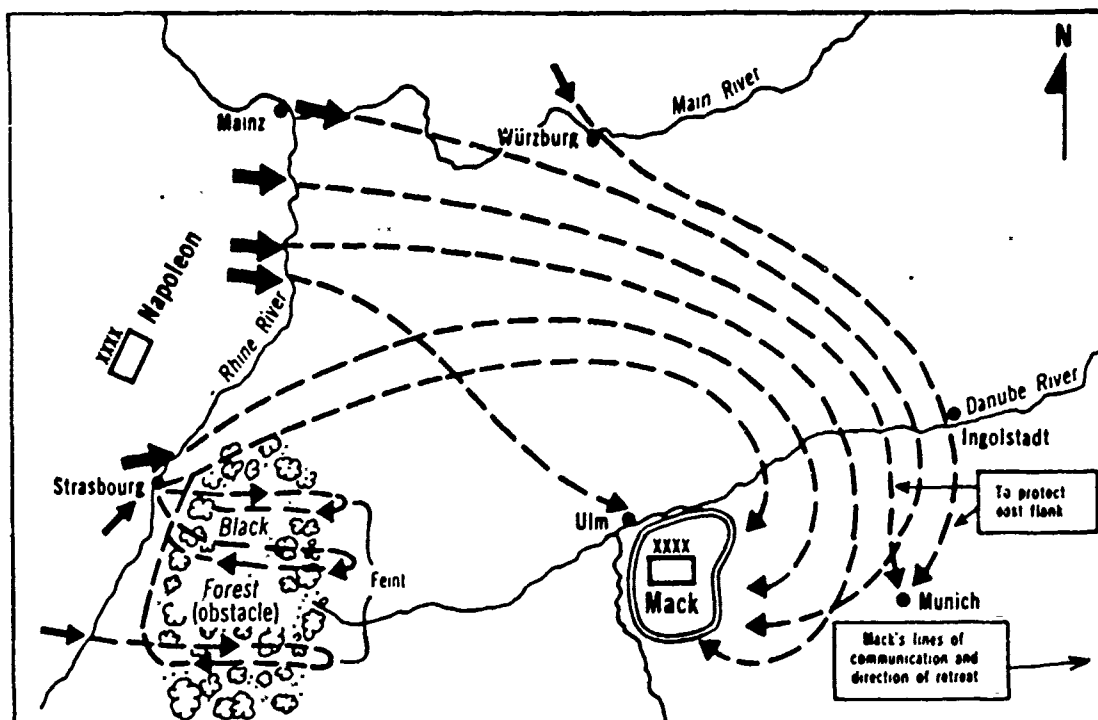


Figure 2, The Ulm Campaign 14

The Ulm Campaign of 1805 is an example of how Napoleon positioned his forces in a manner providing his tactical commanders with conditions favorable for attack [in this case, without a decisive battle]. (See fig. 2)

Napoleon's greatest impact, however, is twofold. First, he recognized that a level of war existed between tactical battles and strategy – a level he called "Grand Tactics." <sup>15</sup> His organization and employment of corps provided units for "Grand Tactics." The Ulm Campaign becomes an example of "Grand Tactical" or operational maneuver. Second, his experiences gave rise to great study and thought on the art of war. Most notable was his influence on Clausewitz and Jomini, the pre-eminent theorists of the nineteenth century. <sup>16</sup>

During the last half of the nineteenth century, improvements in firearms, transportation, and communications; in conjunction with the increasing ability of nation-states to raise large armies identified the need for continued changes in military strategy, tactics, command, and organization. In particular, rifled weapons provided firepower which made

frontal assaults extremely costly and extended frontages made tactical envelopment unfeasible. One only needs to review the campaigns of the American Civil War to see how the evolving technology and ideas created "a tactical and operational deadlock." 17

Confronted with the problems associated with more accurate weapons and extended frontages, Helmuth von Moltke the Elder, chief of the Prussian general staff from 1857 to 1887, developed the concept of "strategic envelopment." Moltke's idea was to meld tactical and operational requirements to outflank the enemy in "one continuous ... sequence combining mobilization, concentration, movement, and fighting." 18 The keystone to Moltke's concept was the initial concentration and deployment of forces. Moltke wrote, "A mistake in the original concentration of the army can hardly be rectified during the entire course of the campaign." 19 The recognition by Moltke of facilitating operational and tactical warfighting by initially concentrating forces at positions of advantage is a concept that is withstanding the test of time. Continued developments in weaponry,

communications, and transportation underscore the need for modern armies to achieve operational maneuver in order to win campaigns.

Eventually, Prussian doctrine codified Moltke's concept of *Kesselschlacht* or "planned battle of encirclement and annihilation." 20 The impact of *Kesselschlacht* is obvious in German military thought through World War II (WWII).

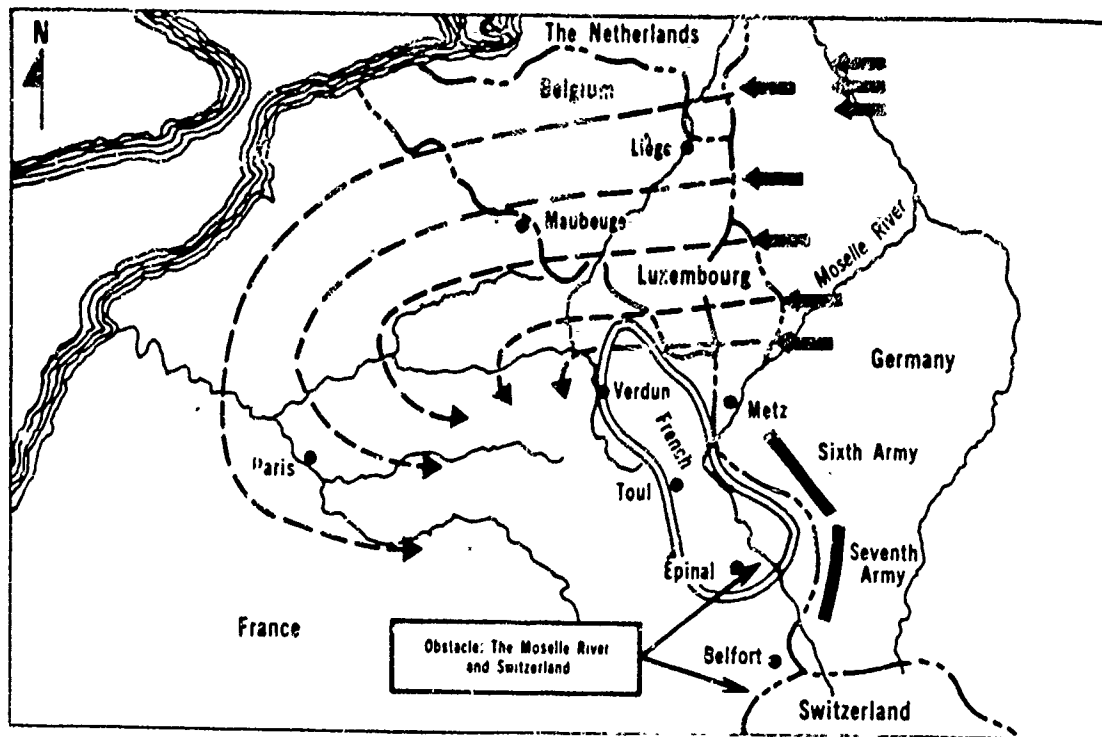


Figure 3, The Schlieffen Plan 21

Despite Moltke's break-through in operational thought, World War I (WWI) demonstrated its difficulty in accomplishment. The Schlieffen Plan of 1905 clearly reflects the encirclement and annihilation sought by *Kesselschlacht*. (See fig 3) 22 Modifications to the plan, by Count Helmuth von Moltke the Younger, as well as the inability to sustain the operation led to its failure on the western front. This led to war characterized by stalemate, trenches, and an emphasis on overwhelming firepower at the exclusion of maneuver. 23

The Battle of Tannenberg offers an illustration that, despite the problems on the western front, the concept of *Kesselschlacht* was alive and well. (See fig. 4) Through offensive tactics, in the course of a defensive campaign, General Paul von Hindenburg extracted losses of over 250,000 troops on Russian armies at a cost of 10,000 German soldiers. 24

Following the war, extensive debate took place in European armies on alternative styles of warfare to avoid the stalemate experienced on the western front. The German and Soviet armies took to heart *Kesselschlacht* and developed maneuver-oriented doctrines that served them extremely well



during the campaigns of WWII. In his book, European Armies and the Conduct of War, Hew Strachan states that In 1936 "... the Red Army had the most advanced doctrine and the greatest capability for armored warfare in the world." <sup>25</sup> The Soviets have capitalized on their WWII experience and have expanded their concept of maneuver warfare.

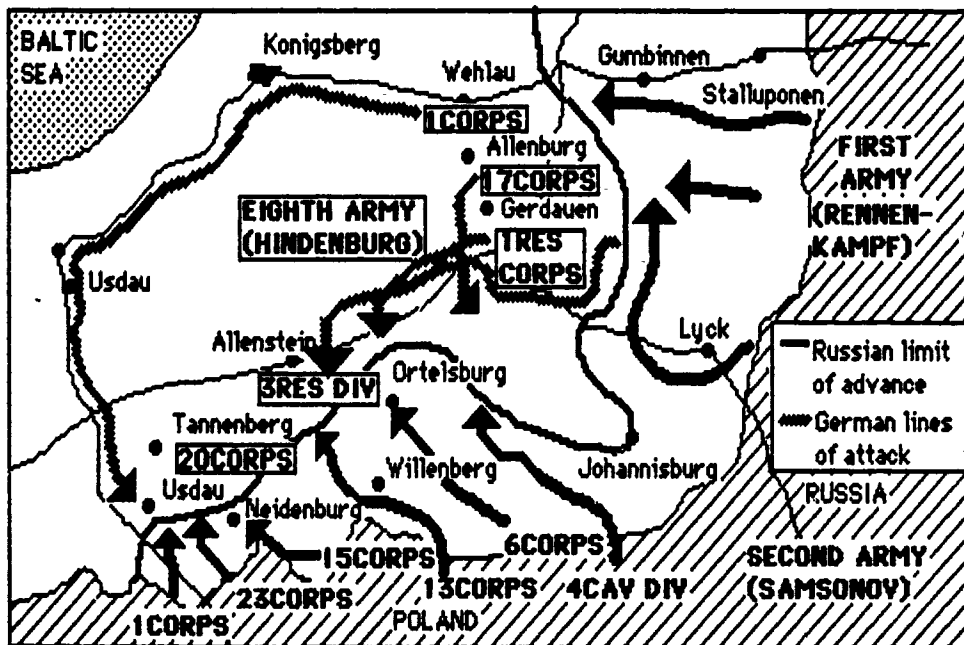


Figure 4, The Battle of Tannenberg <sup>26</sup>

The American Army has not been without an understanding of Moltke's basic concepts. George Patton successfully employed maneuver doctrine during the Normandy break-out. (See fig. 5) Maneuvering his XV Corps (under MG Wade H. Haislip) around to attempt to close the Falaise Gap while holding German forces in position with the remainder of his forces, Patton nearly completed the capture and destruction of a large German element. In doing so, he illustrated the importance of freedom of action in operational maneuver. 27

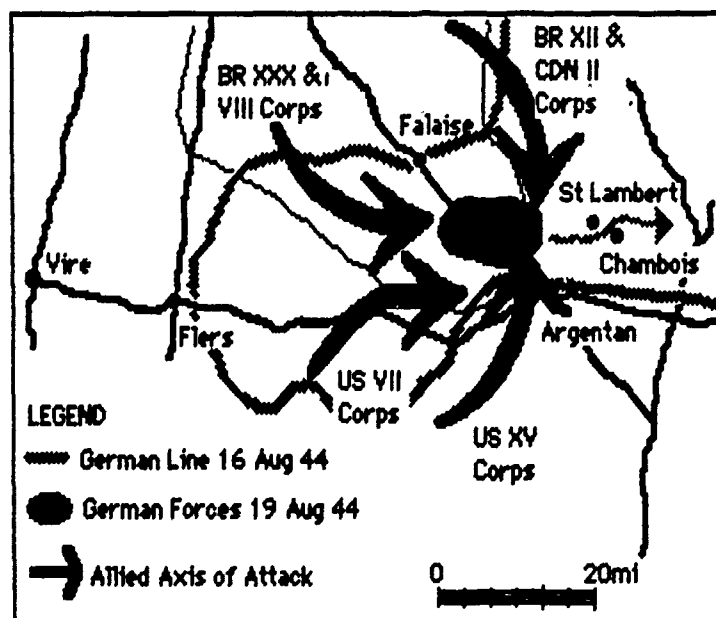


Figure 5, The Falaise Gap 28

It is clear that since WWII, two "schools of thought" have developed on employing forces in large-unit operations and campaigns. One of these approaches is the attrition theory. This theory advocates the physical destruction of the enemy's forces. The object becomes the massing of assets and forces to destroy the enemy by firepower. 29 Maneuver compliments by providing means to apply firepower at the right spot.

The alternative is a maneuver-based theory. Maneuver theory encompasses two important points. First, the emphasis is on breaking the spirit and will of enemy forces by occupation of positions to destroy or threaten destruction of large scale enemy forces. Second, maneuver theory implies that we conduct our actions in "relation" to the enemy. 30 This means we guide battlefield activities by careful and deliberate study of the enemy. The object is to identify weak points and concentrate our strength against them.

Armies cannot strictly choose maneuver or attrition theory. To be sure, there is a distinct interrelationship between the two. 31 Of utmost importance is the selection of which theory will have primacy. Then COL

Robert E. Wagner emphasized the importance of deciding which theory to follow in an article in Military Review in August 1980. He states:

The debate over these two styles of warfare is critical because doctrine must be translated through training into an ability to win battles. If the tenets on which our training is based are wrong, then we face the dismal prospect of having prepared improperly for a future conflict. Training can hardly be changed in the midst of a fast paced fire-fight after we have found that the doctrinal foundations of our training are not sound. 32

Since WWII, US Army employment of maneuver oriented doctrine has varied widely. GEN Douglas MacArthur successfully employed operational maneuver at Inchon to regain almost all the terrain lost to the North Koreans. Two recent conflicts, however, heavily influenced the development of our doctrine in the 1970s. The first was the Vietnam War and its almost exclusive emphasis on airmobility and small unit tactics. National political and strategic policies precluded the use of large scale maneuver and essentially relegated its use, on any scale, to reacting to North Vietnamese Army or Viet Cong maneuvers. 33 The second conflict was the Arab-Israeli War in 1973 and its illustration of modern lethal weapons. 34 From this

experience, our leaders and doctrine writers drew heavily on the impact of firepower results and, unfortunately, failed to recognize the role of maneuver. The ensuing doctrine, considering these conflicts, naturally reflected our orientation toward the tactical employment of massive firepower. The doctrine, expressed in the 1976 version of FM 100-5, became widely known as "Active Defense." GEN William E. DePuy, the TRADOC Commander responsible for Active Defense, later remarked:

Although FM 100-5 is called operations, we were thinking tactics. That was a fatal flaw. We were wrong in not grasping that. None of us had studied the military business at the operational (staff) level very carefully or thoroughly or well. 35

Criticism of "force-ratio and firepower-based battle" expressed in Active Defense, unwillingness to match Soviet numerical advantage, and a need to remain a credible deterrent force caused us to abandon the attrition theory of Active Defense for maneuver theory. 36 Military reformers contending that the only viable doctrine for smaller forces is one based on maneuver theory, supported this shift in doctrine. 37 This new theory

emerged as AirLand Battle doctrine in 1982. An article written by the primary FM 100-5 writers identified the controlling theme of the doctrine.

It stresses the importance of the initiative, stating that, in all operations, commanders will attempt to throw the enemy off balance with a powerful blow from an unexpected direction and continue vigorous operations until the enemy is destroyed. Success in battle requires that initiative, depth, agility, and synchronization characterize our thinking and our operations. 38

AirLand Battle marked the reinstatement of the operational level of war left out of the 1976 Active Defense. Continued modifications brought an update in 1986. It is our current doctrine.

#### Assumptions

1. AirLand Battle Doctrine is valid.
2. The case studies are valid examples of operational maneuver as understood by leaders executing the actions and as interpreted in this study.

3. A finite method for determining a characteristic is not available.

4 It is possible to deduce characteristics of successful operational maneuver from an analysis of AirLand Battle Doctrine.

### Definition of Terms

Area of Operations (AO). "That portion of an area of conflict necessary for military operations. Areas of operation are geographical areas assigned to commanders for which they have responsibility and in which they have authority to conduct military operations." 39

Area of Responsibility (AOR). "A defined area of land in which responsibility is specifically assigned to the commander of an area for the development and maintenance of installations, control of movement, and the conduct of tactical operations involving troops under his control along with parallel authority to exercise these functions." 40

Campaign. "A campaign is a series of joint actions designed to attain a strategic objective in a theater of war." 41

Center of Gravity. "It is that characteristic, capability, or locality from which the force derives its freedom of action, physical strength, or will to fight." 42

Characteristic. Characteristic is an adjective defined in The American Heritage Dictionary (AHD) as "Pertaining to, indicating, or constituting a distinctive character, quality, or disposition." It is also a noun defined as "A distinguishing feature or attribute." Characteristic designates the identifying and especially intrinsic feature of an item. 43

Corollary. Defined in the AHD as, "A proposition that follows with little or no proof from one already proven." This includes deductions, inferences, and natural consequences or effects. 44

Culminating Point. "... a point where the strength of the attacker no longer significantly exceeds that of the defender, and beyond which continued offensive operations therefore risk overextension, counterattack, and defeat." 45



Lines of Operation. "Lines of operation define the directional orientation of a force in relation to the enemy." 46

Maneuver. "The movement of forces supported by fire to achieve a position of advantage from which to destroy or threaten destruction of the enemy." 47

Military Strategy. "Military strategy is the art and science of employing the armed forces of a nation or alliance to secure policy objectives by the application or threat of force." 48

National Strategy. "The art and science of developing and using the political, economic, and psychological powers of a nation, together with its armed forces, during peace and war, to secure national objectives." 49

Operational Art. "Operational art is the employment of military forces to attain strategic goals in a theater of war or theater of operations through the design, organization, and conduct of campaigns and major operations." 50

Operational Maneuver. The advantageous positioning of forces in relation to the enemy's operational center of gravity prior to or during combat. [Chapter three explains the development of this definition]

Significant. Significant is an adjective defined in the AHD as "Important; notable; valuable." 51 These terms will apply primarily in the identification of significant characteristics of successful operational maneuver.

Tactics. "... tactics is the art by which corps and smaller unit commanders translate potential combat power into victorious battles and engagements." 52

Theater of Operations. "That portion of an area of war necessary for military operations and for the administration of such operations." 53

Theater of War. "That area of land, sea, and air which is, or may become, directly involved in the operations of war." 54

Theater Strategy. "The collective strategic concepts and courses of action directed toward securing the objectives of national and alliance policy by the use of force or threatened use of force within a theater." 55

### Delimitations

1. I limited case studies to actions conducted since World War II.
2. This study will not render a judgment as to whether the US Army's operational maneuver doctrine is either good or bad.
3. I limited analysis of doctrine primarily to FM 100-5 and other documents which support information contained therein.
4. This study will not consider the emerging doctrine known as AirLand Battle Future.

### Summary

This chapter introduced the research question and traced the background leading to its formulation. It also established the historical precedent and necessity for operational maneuver. Finally, it identified the parameters and methodology that will guide the study. The following chapter will present a brief overview and assessment of the literature relevant to the thesis.

## CHAPTER ONE ENDNOTES

<sup>1</sup> Simon, Julian L., Basic Research Methods in Social Sciences, (New York: Random House, 1973), 53.

<sup>2</sup> Morris, William, ed., American Heritage Dictionary, New College ed., (Boston: Houghton Mifflin Company, 1976), s. v. "corollary."

<sup>3</sup> Luttwak, Edward N., "The Operational Level of War," International Security, (Winter 1981), 58.

<sup>4</sup> Marcy, Scott A., "Operational Art: Getting Started," Military Review, (Sep 90), 106.

<sup>5</sup> Marcy's article is an example.

<sup>6</sup> Marcy, "Operational Art: Getting Started," 106.

<sup>7</sup> Department of the Army, FM 100-5, Operations, (Washington, D.C.: GPO, 1986), 10.

<sup>8</sup> Willoughby, Charles Andrew, Maneuver in War, (Harrisburg: Telegraph Press, 1939), 40. (Reprinted by the US Army War College Art of War Colloquium, Nov 83)

<sup>9</sup> Conference Report, House of Representatives Report 99-824, Goldwater-Nichols Department of Defense Reorganization Act of 1986, (Washington D.C.: GPO, Sep 85), Title IV. This reference taken from USACGSC FB050, Fundamentals of Joint and Combined Operations. Extract is from an Association of the United States Army Fact Sheet titled Goldwater-Nichols Department of Defense Reorganization Act of 1986 - A Primer.

10 Lind, William S., "Some Doctrinal Questions for the United States Army," Military Review, (Mar 77), 58.

11 Figure 1 is reprinted by special permission of the USACGSC. Map originally published by Paul T. DeVries, "Maneuver and the Operational Level of War," Military Review, (Feb 83), 22.

12 Franz, Wallace P., "Grand Tactics," Military Review, (Dec 81), 32.

13 Atkeson, Edward B., "The Operational Level of War," Military Review, (Mar 87), 31.

14 Figure 2 is reprinted by special permission of the USACGSC. Map originally published by Wallace P. Franz in "Grand Tactics," 35.

15 Franz, "Grand Tactics," 32.

16 Harned, Glenn M., "Principles for Modern Doctrine From Two Venerated Theorists," Army, (Apr 86), 10.

17 Rothenberg, Gunther E., "Moltke, Schlieffen, and the Doctrine of Strategic Envelopment," in Makers of Modern Strategy from Machiavelli to the Nuclear Age, Peter Paret, ed., (Princeton: Princeton UP, 1986), 299.

18 Rothenberg, "Moltke, Schlieffen, and the Doctrine of Strategic Envelopment," 296.

19 Rothenberg, "Moltke, Schlieffen, and the Doctrine of Strategic Envelopment," 300.

20 Addington, Larry H., The Patterns of War Since the Eighteenth Century, (Bloomington: Indiana UP, 1984), 49.

21 Figure 3 reprinted by special permission of the USACGSC. Map originally published by Wallace P. Franz in "Grand Tactics," 37.

22 Franz, "Grand Tactics," 37. Figure 3, The Schlieffen Plan, taken from this page.

23 Addington, The Patterns of War Since the Eighteenth Century, 96-99.

24 FM 100-5, p. 130-1.

25 Strachan, Hew, European Armies and the Conduct of War, (London: George Allen and Unwin Publishers, Ltd., 1983), 159.

26 This map produced by me based on data published by Anthony Livesey, Great Battles of World War I, (New York: MacMillan Publishing, 1989), 26.

27 Franz, Wallace P., "Maneuver: The Dynamic Element of Combat," Military Review, (May 83), 8-9.

28 This map produced by me based on data published by Richard Nakteil, Atlas of World War II, (New York: Military Press, 1985), 178.

29 Lind, William S., "Military Doctrine, Force Structure, and the Defense Decision-Making Process," Air University Review, (May/June 1979), 22.

30 Luttwak, Edward N., "The American Style of Warfare and the Military Balance," Survival, (Winter 1981), 57-8.

31 Lind, "Some Doctrinal Questions for the United States Army," 58.

32 Cited in DeVries, "Maneuver and the Operational Level of War," 18. Actual source is "Active Defense and All That," Military Review, (August 1980), 4-5, by Robert E. Wagner.

33 DeVries, "Maneuver and the Operational Level of War," 19.

34 Romjue, John L., From Active Defense to AirLand Battle: The Development of Army Doctrine 1973-1982, TRADOC Historical Monograph Series, (Fort Monroe: GPO, 1984), 3.

35 Cited in Atkeson, "The Operational Level of War," 29. Quote taken by author during an interview with GEN DePuy on 16 April 1986.

36 Romjue, Active Defense to AirLand Battle, 51.

37 Lind, "Military Doctrine, Force Structure, and the Defense Decisio: Making Process," 23.

38 Wass de Czege, Huba and Holder, L. D., "The New FM 100-5," Military Review, (Jul 82), 55.

39 Department of the Army, FM 101-5-1, Operational Terms and Symbols, (Washington D. C.: GPO, 1985), 1-6.

40 FM 101-5-1, Operational Terms and Symbols, 1-6.

41 FM 100-5, Operations, 10.

42 FM 100-5, Operations, 179.

43 American Hertitage Dictionary, s. v. "characteristic."

44 American Heritage Dictionary, s. v. "corollary."

45 FM 100-5, Operations, 181.

46 FM 100-5, Operations, 180.

47 FM 101-5-1, Operational Terms and Symbols, 1-44.

48 FM 100-5, Operations, 9.

49 The Joint Chiefs of Staff, JCS Pub 1-2, Department of Defense Dictionary of Military and Associated Terms, (Washington, D. C.: GPO, 1989), 244.

50 FM 100-5, Operations, 10.

51 American Heritage Dictionary, s. v. "significant."

52 FM 100-5, Operations, 10.

53 JCS Pub 1-2, Dictionary of Military and Associated Terms, 34.  
Definition is actually listed under "area of operations."

54 JCS Pub 1-2, Dictionary of Military and Associated Terms, 34.  
Definition is actually listed under "area of war."

55 The Joint Chiefs of Staff, JCS Pub 3-0, Doctrine for Unified and Joint Operations (Test Pub), (Washington, D. C.: GPO, 1990), xiv. Upon final approval of this pub, this definition is proposed for inclusion in JCS Pub 1-2.



## CHAPTER 2

### SURVEY OF LITERATURE

"We studied everything we could get our hands on. You start working hard right from the first. You can't say later on in life, 'I will start studying.' You have got to start in the beginning."

General of the Army Omar N. Bradley

#### Chapter Overview

The purpose of this chapter is to review and assess the sources used in this study. I will discuss sources which were of significant assistance in greater detail. The general outline will consist of a review by type-source documents (general reference, periodicals, studies, theses, monographs).

There are a large number of primary and secondary sources that deal with the topic of operational maneuver. In conducting this study it was

important for me to study many sources just to develop an internal knowledge of the subject. I found no single source that dealt with the research question totally. Instead, the research question and the large amount of available material allowed me flexibility in developing answers.

Many of the sources I looked at discussed the same general topic areas. In distinguishing between similar sources to use in my research I concentrated on references that provided balanced views and were simplest to understand.

### General Reference

This area includes single and multiple author books, edited works, and US Armed Forces publications. US Army manuals provide the primary reference for analysis of current doctrine. The other documents highlighted above were of significance in supplementing this doctrine or in supporting background information or development of case studies. I will discuss the significance of several of these sources.

US Army Field Manual (FM) 100-5, Operations, is the primary source of Army doctrine. It is the Army's capstone document and from it develops all the other supporting manuals and publications. This manual does not possess a lengthy bibliography. However, its contents reflect a perspective of historical lessons and contemporary theory. While there are many criticisms of this manual, it is the definitive source of information on our tactical and operational doctrine. The quantity and quality of information in FM 100-5 allow drawing conclusions about the research question. This source is the point of departure for my analysis of current doctrine.

FM 100-7, The Army in Theater Operations, is an initial draft publication designed to support FM 100-5. Its purpose is to provide more specific guidance to senior army commanders and staffs in conducting large unit operations and campaigns. While only in draft form, it attempts to build on concepts discussed in FM 100-5 by demonstrating their application at the operational level of war. This manual is representative of emerging doctrine on the army and operational art.

FM 100-7 addresses the topic area in some detail, but provides no answers to the research question. Like FM 100-5, it provides information

that allows for making conclusions about operational maneuver. The manual was of particular assistance in analyzing doctrine in chapter 2.

Charles Andrew Willoughby's book Maneuver in War, was of significant help in this thesis. Written prior to World War II, this work "... is an inventory of basic military ideas and their execution on the field of battle." <sup>1</sup> His controlling idea is the continuity of maneuver in important campaigns of the eighteenth and nineteenth centuries. <sup>2</sup> Willoughby uses a large number of historical examples to support his discussions and offers several key concepts or ideas that readily support doctrine in FM 100-5. The US Army War College selected this book for the Art Of War Colloquium reflecting its continued relevance.

Richard Simpkin's book Race to the Swift: Thoughts on Twenty First Century Warfare, is an excellent source that provides a large number of thought-provoking ideas. The strength of Simpkin's idea lay in his ability to explain battlefield concepts using scientific schematics. The rationale of his explanations clearly demonstrates the simplicity and necessity of maneuver concepts. Of particular significance to this study is Simpkin's

discussion of "leverage." This theory provided great support to the FM 100-5 discussion of operational maneuver effects.

There are a large number of sources that I reviewed and did not cite in the thesis. The Basic Principles of Operational Art and Tactics, by V. YE. Savkin; The Offensive, by A. A. Sidorenko; and Soviet Blitzkreig Theory, by P. H. Vigor provides good background information on the Soviet perspective of operational art.

Development of the case studies on the eastern front required primary sources such as Panzer Battles, by MG F. W. von Mellenthin and Lost Victories, by Erich von Manstein. Several excellent secondary sources such as Operation Citadel, by Jan Piekalkiewicz; Stalingrad to Berlin: The German Defeat in the East, written for the US Army Center for Military History; and Operation Barbarossa, by Bryan I. Fugate provide thorough accounts and analysis of actions. Soviet resources are generally less available than sources which examine the campaigns from the German side.

Two particular books provided excellent information on air operations in support of German ground operations. They are The Rise and Fall of the German Air Force, edited by W. H. Tatum IV and E. J.

Hořschmidt and a USAF historical study entitled German Air Force Operations in Support of the Army, written by D. Paul Diechmann.

Augmenting combat reports from the Inchon landings are secondary sources such as Victory at High Tide, by Robert Hehl; Inchon Landing, by Michael Langley; and Hell or High Water: MacArthur's Landing at Inchon, by Walter J. Sheldon. The most useful source, however, was South to the Naktong, North to the Yalu. United States Army in the Korean War Series, by Roy Edgar Appleman.

The best information I found on air and naval operations in support of the ground forces in Korea was in volume II of the US Marine Operations in Korea series by Lynn Montross and Nicholas A. Canzona.

A large number of primary sources are available on operations during the 1973 Arab-Israeli War to include On the Banks of the Suez, by Avraham Adan, and The War of Atonement, by Chaim Herzog. Many secondary sources provide alternative perspectives on the war. Martin van Creveld's chapter entitled "Masters of Mobile Warfare," in Command in War, offers keen insights into Israeli success in the 1973 war. Sources examining the

war from the Arab side are generally less available than those that discuss the war from an Israeli standpoint.

Chaim Herzog's book, The Arab-Israeli Wars: War and Peace in the Middle East from the War of Independence through Lebanon, provided an excellent condensed discussion of Israeli and Arab air and naval operations during the 1973 war.

Finally, military atlases edited by Thomas E. Griess, widely known as the "West Point Military Series," provided excellent maps used for illustration in chapter four. The atlases also assisted me in generally understanding what occurred during campaigns.

### Periodicals

The amount of periodical articles that related to the research question was limitless. An article to support almost every aspect of the research was easy to find. I did not, however, find an article that dealt directly with the research question. Military Review and Parameters stand out as publications that contained many articles related to the topic.

Military Review appears to have hosted a running discussion of operational art and operational maneuver since 1982. The quality and quantity of contemporary articles match those written in the past.

Articles like "Some Doctrinal Questions for the US Army," by William S. Lind and "The American Style of War and the Military Balance," by Edward N. Luttwak provided excellent information on attrition and maneuver theories of war.

The September 1990 issue of Military Review was particularly timely to this study. This issue contained no less than eight scholarly articles dealing with operational art. The articles, written by authors from theorist to Commanders in Chief (CINCs) provided insights used throughout chapter three and identified a number of sources for background information.

With the recent completion of military operations in Iraq and Kuwait, there are abundant sources in the open press. General Schwartzkopf's post campaign briefing is an excellent source of operational maneuver information. The classification of many reliable resources forced me to use open sources extensively in discussing Operation Desert Storm.



## Studies, Reports, Theses, and Monographs

A Defense Technical Information Center (DTIC) search in the US Army Command and General Staff College (CGSC) Combined Arms Library identified 25 theses and monographs on the topic area. No single monograph or thesis addressed the specific research question. While they provided excellent insights on ideas and sources, I avoided relying on these documents to ensure a personal approach to the research question.

I did not use any technical reports in completion of this thesis.

The Combat Studies Institute (CSI) and CGSC instructional departments publish works that contributed significantly to this study.

The course syllabus for A332, The Operational Level of War, provided probing study questions, sources, and articles for consideration. Handouts used at the School for Advanced Military Studies (SAMS) were invaluable. "The Loose Marble - and the Origins of Operational Art" and "The Theory of Operational Art," both by James J. Schneider provided important details for my understanding of the topic.

CSI produces useful reports such as "Soviet Defensive Tactics at Kursk, July 1943" by COL David M. Glantz; and "Larger Units: Theater Army - Army Group - Field Army" by corporate authors. They also publish research surveys like "Standing Fast: German Defensive Doctrine on the Russian Front During World War II," by MAJ Timothy A. Wray to provide accurate, historically based documents on a topic area.

### Summary

The information available on this topic area is extensive. While operational maneuver existed prior to WWII, most important writing occurred since that time. Contemporary literature on the subject continues to be extensive given the US Army's re-introduction of operational art to its doctrine. In completing this study, I attempted to use both contemporary and previously written information. The continuity of the subject allows me to do this. If there is a weakness to this study it is that I failed to include all relevant sources. By trying to maintain a focus on the doctrinal

perspective, I used many of the other sources only for background information.

The bibliography includes all sources cited and reviewed.

## CHAPTER 2: ENDNOTES

1 Willoughby, Charles Andrew, Maneuver in War, (Harrisburg: Telegraph Press, 1939), iv.

2 Willoughby, Maneuver in War, iv.

## CHAPTER 3

### US ARMY DOCTRINE FOR OPERATIONAL MANEUVER

"Principles and rules in the art of war are guides which warn when it is going to go wrong."

A. T. Mahan

"At the very heart of warfare lies doctrine. It represents the central beliefs for waging war in order to achieve victory. Doctrine is of the mind, a network of faith and knowledge reinforced by experience which lays the pattern for the utilization of men, equipment, and tactics. It is the building material for strategy. It is fundamental to sound judgment."

GEN Curtis E. LeMay

"The danger of doctrine per se is that it is apt to ossify into a dogma and to be seized upon by mental emasculates who lack the virility of analytic and synthetic judgement, and who are only too grateful to rest assured that their action, however inept, finds justification in a book, which if they think at all, is in their opinion, written in order to exonerate them from so doing."

J. F. C. Fuller

## Chapter Overview

The over-arching purpose of this chapter is to draw conclusions from AirLand Battle doctrine that will identify characteristics of successful operational maneuver.

To accomplish this task, I have organized the chapter to address AirLand Battle in an evolutionary manner. I will first focus on the sources and fundamental elements of AirLand Battle doctrine. Then I will discuss the role of operational art in our doctrine. From here, I will discuss doctrinal definitions and descriptions of maneuver and ultimately propose a definition for operational maneuver. I will then focus on the role and products of maneuver. Finally, I will propose characteristics of successful operational maneuver by drawing conclusions from this chapter and applying screening criteria from chapter one.

## Sources of Doctrine

Military doctrine is the expressed combination of principles and theory used by military organizations to fight campaigns, major operations, battles, and engagements. <sup>1</sup> In theory, doctrine requires definition and flexibility. Understanding terms, principles and concepts is vital to ensure their effective use in guiding operations. Manuals such as FM 101-5-1, Operational Terms and Graphics, and JCS Pub 1-02, Dictionary of Military and Associated Terms, are examples of how we add definition to our terms and concepts. Doctrine must also be flexible to adopt to changing environments, ideas, and technology. The spectrum of conflict, ranging from peacetime competition to nuclear war, requires that our military element of power be capable of responding to a wide variety of situations. It also requires that army leaders exercise situational judgment in applying doctrine.

The primary source of US Army doctrine is FM 100-5, Operations. Recognizing the inherent relationship between ground and air forces, we

term our fighting doctrine *AirLand Battle*. The current version of FM 100-5, produced in 1986, represents the US Army's first attempt in over 30 years to include the operational level of war in doctrinal manuals. The AirLand Battle concept recognizes the importance of initiative, synchronization, offensive spirit, and commander's intent. While the doctrine discusses the three levels of war (strategic, operational, and tactical), it focuses primarily at the operational and tactical level.

Emerging doctrine is now surfacing in the form of a draft manual entitled FM 100-7, The Army in Theater Operations. This manual is an attempt to expand on doctrine provided in FM 100-5 by showing how the concepts of AirLand Battle apply to army forces at the theater level. Although not yet approved doctrine, the development of this manual is significant. It is indicative of our recognition of the complexity and importance of employing large-scale forces in support of strategic objectives.

At the joint level, JCS Pub 3-0, Doctrine for Unified and Joint Operations (Test), "...provides guidelines for planning and executing theater



strategy, campaigns, and unified and joint operations." 2 This publication has two distinct problems which prevent it from being useful in this thesis.

First, it does not address the requirements and guidance for a Joint Force Commander (JFC). It is highly likely that future conflicts will involve JFCs working within the CINCs theater of operations. Doctrine must be available for these commanders and staffs.

Second, in an attempt to provide doctrine to cover the entire spectrum of conflict, the publication is overly broad in guidance. Thus, the "meat" of principles and fundamentals is absent. 3

### AirLand Battle Doctrine

As the US Army's basic fighting doctrine, AirLand Battle encompasses several concepts. These concepts all involve multiple variables, elements, and factors. They are the principles of war, the imperatives of AirLand Battle, the Battlefield Operating Systems (BOS), the elements of combat power, and the tenets of AirLand Battle. While each

item has distinct impacts on doctrine, they are all mutually overlapping. Concepts evoked in one of the products naturally support concepts in others. Although FM 100-5 does not portray them as such, there is in fact a hierarchical and lateral aspect to the relationship between these entities. Graphically portrayed, they relate to each other as shown in figure 6.

The principles of war are the basic foundation US Army doctrine. These historically rooted principles have withstood the changes in warfare imposed by technology, environment, and ideas. They evolved from thoughts and ideas shared with European armies after World War I. The principles provide general guidance for conducting war at all levels. Their broad application simplifies understanding by leaders at all levels. From these are derived the tenets and imperatives that describe the principles in more contemporary and descriptive terms. In application, however, the imperatives and tenets provide more specific interpretations of the principles of war. Thus, operational and tactical commanders concentrating on imperatives and tenets are actually applying the principles of war.

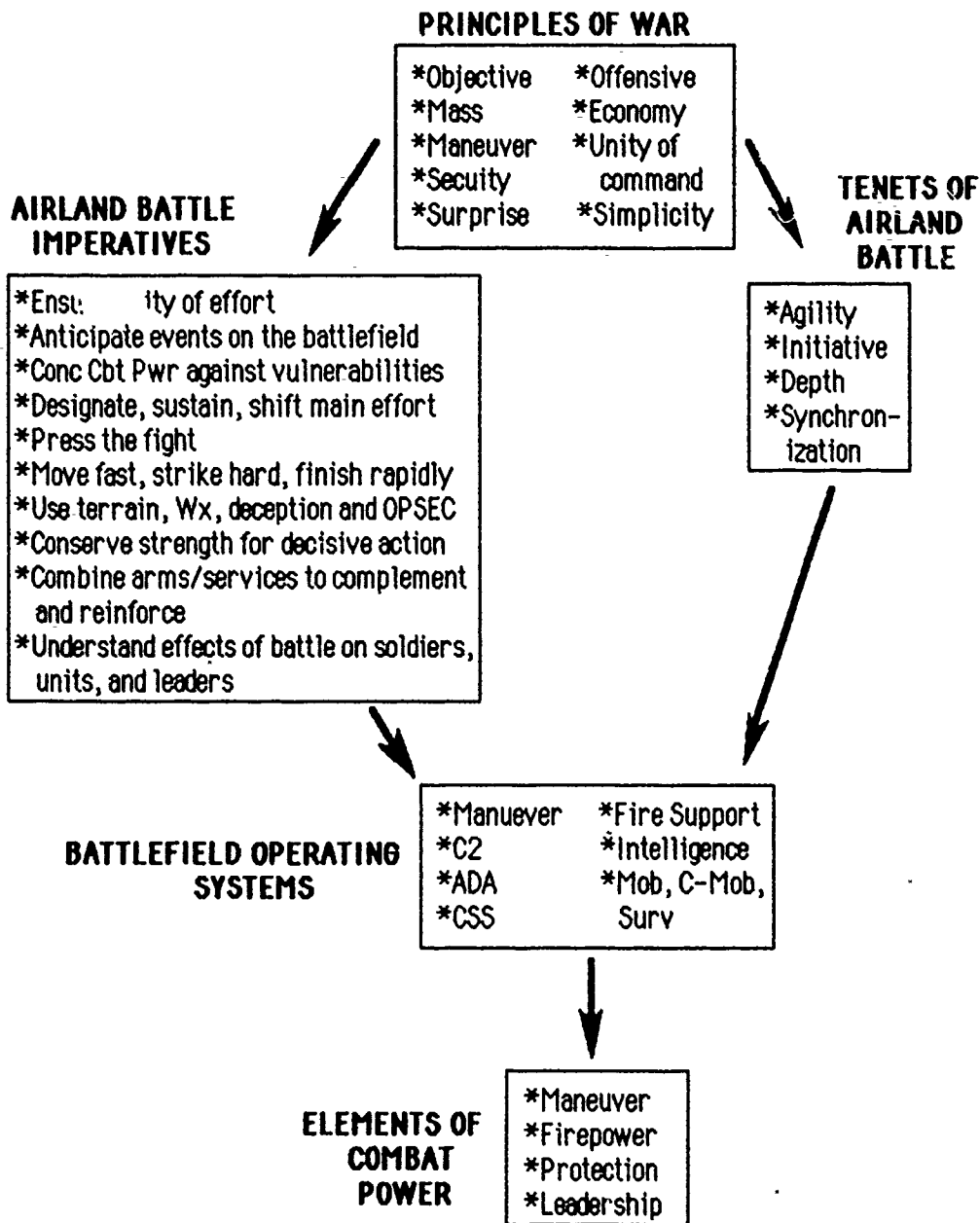


Figure 6, Relationship of AirLand Battle Concepts

The imperatives of AirLand Battle identify key requirements that battlefield commanders must meet in all operations. The 1982 version of

FM 100-5 introduced seven "Imperatives of modern combat." The 1986 version expanded the imperatives to ten and gave them their current name. The imperatives also have historical foundations and are derivatives of the principles of war. The imperatives differ from the principles of war primarily because they provide more specific guidance. <sup>4</sup> For example, the imperative that states, "concentrate combat power against enemy vulnerabilities," expands the principle of "Mass."

The tenets of AirLand Battle prescribe the characteristics of successful operations. <sup>5</sup> They are the descriptive characteristics of what successful combat operations should look like. Adherence to the principles and imperatives, synchronization of the BOS, and generation of combat power at the decisive place and time should yield operations characterized by initiative, agility, depth, and synchronization.

Understanding the principles, imperatives, and tenets will not alone beat the enemy. The operational and tactical commander must properly focus them through the BOS to produce the necessary combat power to defeat the enemy's will and ability to fight. Producing coordinated combined

arms actions requires the synchronization of all the BOS. <sup>6</sup> The seven primary systems in figure 6 represent the combination of 17 different functional areas identified in FM 100-5. <sup>7</sup>

Having focused on the critical coordination and synchronization of functional systems the commander generates combat power. Combat power is the capability to fight based on the combined effects of maneuver, firepower, protection, and leadership. The commander attempts to achieve qualitative and quantitative combat power over the enemy. Units and weapon systems combine with aggressive leaders, smart employment, and flexible plans to provide the commander with the necessary tools to win operations.

In essence, AirLand Battle is a doctrine of principles, systems, and effects. The principles and imperatives provide historically valid and fundamental concepts and guidelines which commanders at all levels use to conduct combat operations. The BOS provides an encompassing system that allows for synchronizing actions and events on the battlefield to generate the greatest combat power at the decisive time and place. The tenets

provide an over-arching vision of successful combat operations. The doctrine places a premium on initiative of leaders and synchronization of arms and services throughout the depth of the battlefield or theater of operations.

### Doctrine and Operational Art

The preface to FM 100-5 states that one of the central aspects of AirLand Battle doctrine is, "...its recognition of the importance of the operational level of warfare ...." <sup>8</sup> Operational art is the link between political objectives and the application of military force to attain them. The principle task for the operational artist is "...to concentrate superior combat power against enemy vulnerabilities at the decisive time and place to achieve strategic and policy aims." <sup>9</sup> (See figure 7)

To understand properly the role of operational art, and subsequently that of operational maneuver, it is necessary to recognize how operational art fits into the art of war. A simple way to illustrate the difference

between theater strategy, operational art, and tactics are to compare them in terms of Mission, Enemy, Troops, Time, and Terrain (METT-T).

	THEATER STRATEGY	OPERATIONAL ART	TACTICS
MISSION	ESTABLISHES STRATEGIC GOALS IN THEATER OF WAR/OPNS	ATTAIN STRATEGIC OBJECTIVES IN THEATER OF WAR / OPERATIONS	ATTAIN OPERATIONAL OBJECTIVES
ENEMY	EFFECTS OF MILITARY ELEMENT OF POWER ON THE ENEMY	IDENTIFY CENTER OF GRAVITY GAIN POSITIONAL ADVANTAGE	GAIN POSITIONAL ADVANTAGE BY FIRE AND MOVEMENT
TROOPS	PROVIDES RESOURCES AND DEVELOPS CONCEPTS	DESIGNS, ORGANIZES, RESOURCES, AND CONDUCTS CAMPAIGNS	EMPLOY COMBAT POWER IN ENGAGEMENTS AND BATTLES
TIME	LONG TERM POLICY EFFECTS	WEEKS / MONTHS	HOURS / DAYS
TERRAIN	THEATER OF WAR	THEATER OF OPERATIONS	LIMITED TO MORE SPECIFIC AREAS WITHIN THE THEATER OF OPNS

Figure 7, Comparison of Theater Strategy, Operational Art, and Tactics

Mission refers to the primary objectives of each level. Enemy refers to how the level of war orients on the threat. Troops refer to allocation and employment of forces and assets. Time refers to the length of operations. Finally, terrain refers to the area of responsibility for each level.

In essence, the theater commander establishes theater strategy to accomplish the following three items: 10

1. Translate political and economic objectives from National Strategy into theater military objectives.
2. Identify broad concepts used to achieve military objectives.
3. Allocate resources provided by the National Military Strategy.

Reduced to its basic elements, FM 100-5 requires the operational commander to answer three questions.

1. What military condition must be produced in the theater of war or operations to achieve the strategic goal?
2. What sequence of actions is most likely to produce that condition?
3. How should the resources of the force be applied to accomplish that sequence of actions? 11



Answering these questions provides the operational commander with the opportunity to defeat the enemy's operational center of gravity. He expresses these answers in the form of campaign plans which delineate phases or operations sequenced in a manner to accomplish the theater objective.

The tactical commander supports the campaign plan by exploiting his potential combat power to win the engagements and battles which contribute to accomplishing the operational objective.

### Maneuver Defined

Willoughby argued in 1939 that it was difficult to define maneuver because of its broad and flippant use throughout then current manuals. 12 More careful preparation of our doctrinal manuals and attempts at standardized definitions are helping to eliminate this problem.

Two terms used in conjunction, yet frequently confused, with maneuver are movement and mobility. While each term has its own distinct definition, there is a close relationship between them.

Movement is motion in any direction, for any purpose, by a force of any size. Time, distance, means, and routes account for the difference in movement at the strategic, operational, and tactical levels. 13

Mobility is the capability and flexibility to move. It includes tangible factors such as flexible organizations, capable, willing leadership, agile equipment, and movement routes and means. It also includes the support of other operating systems like fire support, sustainment, and intelligence. Mobility requires mental flexibility by leaders to anticipate and respond to change. It complements movement by giving the commander flexible options for moving the force. 14

As defined in FM 100-5, "Maneuver is the movement of forces in relation to the enemy to secure or retain positional advantage." 15

[Emphasis added by thesis author] Looking at this definition from a tactical and operational view, some difficulty in understanding ensues. At the

tactical level, maneuver essentially means the coordinated use of fire and movement to gain positional advantage over the enemy. This may involve the use of fire from one force to hold an enemy in place, while another force moves around to weak areas on the flank or rear. From these positions, forces employ fire that leads to accomplishment of the tactical objective.

At the operational level, the basic definition above is somewhat short-sighted by not telling us which aspect of the enemy we should relate to. To be successful, operational maneuver is in relation to the enemy's strength or operational *center of gravity*, not merely his physical position on the ground. An adequate definition of operational maneuver must address this.

While not completely defining operational maneuver, FM 100-5 describes its purpose.

Operational maneuver seeks a decisive impact on the conduct of a campaign. It attempts to gain advantage of position before the battle and to exploit tactical successes to achieve operational results. 16

FM 100-7, The Army in Theater Operations (Initial Draft), does not offer a definition, but describes maneuver at the operational level as, "...the means by which the commander sets the terms of battle, declines battle, or acts to take advantage of tactical actions." 17

In his article, "A New Day for Operational Art," COL L.D. Holder describes operational maneuver in terms of a contest between opposing commanders. They change directions, modify dispositions, and use deception and obstacles to create opportunity to mass and concentrate their forces.

18

LTC Scott A. Marcy states in a recent article, "...the objective of maneuver is to gain a positional advantage so that the enemy quits because he knows that defeat is imminent." 19

It should be obvious by the previous four paragraphs that there is a wide variety of thought on what operational maneuver is. To be certain, no one definition is completely right or wrong. For the purpose of this thesis however, I will propose a definition.

Operational maneuver is the advantageous positioning of forces in relation to the enemy's operational center of gravity prior to or during combat.

Operation Desert Storm illustrated this definition very well. The positioning of forces from August 1990 until January 1991 represented operational maneuver prior to battle. The subsequent operational movement of forces during the air and ground campaign represented operational maneuver during combat to create the best opportunities for tactical exploitation.

Two primary purposes of operational maneuver are:

1. To constrain the actions of the enemy while expanding one's own freedom of action. 20

2. To create favorable conditions for subsequent tactical exploitation. Operational maneuver sets the terms for immediate and future battle.

There are three key aspects related to maneuver at the operational level:

1. Like tactical maneuver, operational maneuver is a product of movement and mobility. Commanders must possess the mental as well as physical capabilities to get forces to the right place and time.

2. Operational maneuver focuses primarily on the enemy center of gravity. This follows from the concept that operational art is the means by which military forces accomplish strategic goals. If the strategic goal is to prevent army X from occupying region Y; then, commander Y must concentrate the mass and strength of his forces in a manner that threatens commander X's ability to occupy.

3. Operational maneuver requires mental and physical war-making capability. Ideally, operational maneuver should result in such an advantageous position, that the opposing commander has no option but to surrender. Commanders must anticipate actions of opponents and maintain flexible thought and response. FM 100-7 states:

A central theme at the operational-level is the intellectual contest between opposing commander(s), each supported by a significant intelligence effort, trying to influence the other in positioning of main forces and reserves. 21

Referring to Operation Desert Storm, GEN Schwartzkopf and his staff displayed this intellectual contest with Iraqi Army leaders. The positioning of amphibious forces in the North Persian Gulf and movement of ground forces just prior to the ground assault are two examples of this.

Having discussed definitions for tactical and operational maneuver it is useful to highlight key differences. Four primary differences are linkage to strategic goals, time and space considerations, movement and synchronization of forces, and employment of joint and combined forces.

There is an undeniable linkage between employment of military forces and strategic objectives. 22 Operational maneuver provides the means by which we accomplish strategic goals. Tactical maneuver provides means by which subordinate organizations secure military objectives leading to accomplishment of operational goals.

There is a distinct time and space consideration associated with operational maneuver. Tactical actions involve kilometers and hours. Operational actions may involve regions and days or weeks. 23 Posturing of forces may require strategic movement between continents as well as

occupation of land, air, and sea adjacent to the theater of operations. Major campaigns may include the sequencing of several phases and operations. Employment of ground forces may follow the initiation of naval or air operations.

Movement and synchronization of forces are areas where operational and tactical maneuver differs. In his book, Strategy, Liddell Hart discusses the concept of *distributed strategic advance*. This concept advocates that major components of a large formation move in "calculated" independent formations. The intention being to threaten enemy lines of communications (LOCs) and supplies, disrupt dispositions, and force dispersion of enemy forces. 24 Operational commanders apply distributed advance to deceive the enemy; force his response; and, threaten his center of gravity. Tactical commanders attempt to synchronize the BOS to generate the greatest combat power at the decisive point.

COL Wallace P. Franz suggests another important aspect of employing forces in operational maneuver in his unpublished document entitled "Large Unit Maneuver." In discussing the need to differentiate



synchronization at the operational and tactical levels he reiterates the increase in mass, time, and space. He goes on to suggest another critical difference.

Another method used to distinguish operations from tactics is to consider the deployment and concentration of fire in tactics while the deployment and concentration of large units is in operation. Following on this concept is the idea that operations are conducted with a degree of freedom of action not found at the tactical level. 25

A final difference is that operational maneuver will include the employment and synchronization of joint and combined forces. Ground, air, and sea forces will cooperate to conduct operations that defeat the enemy center of gravity. This is not to suggest that tactical forces won't require support from joint or combined organizations or assets. Tactical ground commanders plan for and receive support from air and naval forces. Tactical coalition forces will fight on the flanks of each other. Tactical commanders do not, however, direct positioning and movement of joint forces. At the operational level, the commander directs the synchronization of joint and combined assets and units to ensure coordination.

## The Role of Maneuver in AirLand Battle

Our doctrine reflects maneuver in three ways. It is a principle of war; it is an element of combat power; and it is a functional operating system. In order to fully understand the role of maneuver we must briefly examine each aspect of maneuver.

As a principle, maneuver is the means by which a commander: 26

- \* gains positional advantage
- \* gains and maintains the initiative
- \* exploits success
- \* preserve's freedom of action [while constraining the enemy's]
- \* reduces vulnerability

Without maneuver, a commander lacks means to accomplish operational and strategic goals. Maneuver is a dynamic element through which forces move and unite in relation to the enemy. The goal is to get forces into advantageous positions at the decisive time and place to allow the exploitation of combat power.

As an element of combat power, maneuver is a critical commodity which commanders combine with firepower, protection, and leadership, to specific battlefield situations. Maneuver supports firepower by getting weapon systems and units into advantageous positions relative to the enemy. From these locations, units focus the destructive and demoralizing effects of firepower on the enemy. Maneuver allows forces to gain protection through speed, agility, and action. Careful study and use of terrain protects forces as they approach the enemy or await his attack. Use of indirect approaches, surprise, and deception enhance the ability to generate combat power at the decisive point. Leadership provides the inspiration, motivation, direction, and intelligence that bring the elements of combat power to bear against the enemy. When combined together according to the situation, the commander prevents the enemy commander from generating effective combat power. 27

The role of maneuver as a functional operating system is a little more difficult to grasp. The American Heritage Dictionary defines system as, "A group of interacting, interrelated, or interdependent elements forming

or regarded as forming a collective entity." 28 In military parlance, this describes how combat, combat support, and combat service support arms combine as independent units to create a collective force.

As a Battlefield Operating System (BOS), tactical maneuver represents the key activities of combat forces conducting maneuver to gain advantageous positions. Maneuver units combine command and control, intelligence, and engineer systems to arrive at decisive points and concentrate combat power against the enemy. The fire support and air defense systems provide means to gain and exploit positional advantage. The combat service support system provides sustainment throughout operations. 29

Very similar to the discussion above, FM 100-7, The Army in Theater Operations (Initial Draft), proposes six functions which operational commanders must synchronize to influence the outcome of an operation. These operational functions directly correlate to the BOS discussed earlier. They are necessarily different to reflect the broader considerations and requirements for operational commanders. The operational functions are:

- \* Command and Control
- \* Movement and Maneuver
- \* Intelligence
- \* Fire Support [Includes Air and Battlefield Air Interdiction]
- \* Deception
- \* Combat Service Support

Of the six functions, maneuver is the most important because it is the function that creates a decisive impact in a campaign or operation. 30 The commander and his staff uses the other five systems to maximize the effects of movement and maneuver.

Operational maneuver requires the commander to consider the battlefield in a larger scope. He must look beyond battles and engagements to determine the necessary sequence of actions to produce the desired objective. In anticipating future actions, he must consider the movement and sustainment of large formations. His focus is destruction of the enemy's center of gravity. To the operational commander, maneuver is the way he "sets up" his tactical commanders for success.

The addition of operational movement and deception give further insight into the domain of the operational commander.

Operational movement is:

... the regrouping, deploying, shifting, or moving, joint/combined operational formations to and within the theater from less threatened or less promising areas to more decisive positions elsewhere. 31

Operational movement may result from strategic deployment of forces from CONUS or from large scale repositioning of forces within the theater. The importance of this concept is that the operational commander synchronizes the movement of forces in his area of responsibility. In doing so, he assures the availability of reserve forces and maintains flexibility to react to changing situations.

Deception takes on significant importance at the operational level. Deception at this level provides the first opportunity for commanders to adopt long term deception operations to "condition" the enemy prior to combat. 32 Of particular note is the availability of an intelligence

architecture as well as forces which can actually support the deception objective.

Operational deception assists operational maneuver by drawing the enemy's attention away from intended courses of action. Ideally, deception operations cause the enemy to react to activities away from the operational commander's main effort. In doing so they expose weak points that lead to defeat of their center of gravity.

The most recent example of operational deception was the positioning of a large Marine amphibious contingent off the coast of Kuwait. This deception had three important effects on the Iraqi leadership.

1. It forced them to commit up to four divisions for coastal defense.
2. It reinforced their belief that the main assault would come from the sea.
3. It assisted in diverting their attention [in conjunction with air strikes and probes at their main defenses] from preparations for the main operation west of Wadi al Batin.

## Maneuver and the Concepts of Operational Design

Operational maneuver is not means unto itself. Not only must he synchronize operational function, but the operational commander and his staff must consider the key concepts of operational design.

I have already mentioned the first of these concepts. The following discussion will provide more detail on the concept. FM 100-5 defines *center of gravity* as "...sources of strength or balance." <sup>33</sup> Clausewitz implies that the center of gravity also relates to mass, concentration, and cohesion. Centers of gravity normally assume the form of massed forces. They provide cohesion to the entire force by serving as a source of strength for all the elements. <sup>34</sup> It is usually an activity, formation, location, or person whose loss will force the enemy off balance. The current Persian Gulf crisis illustrates an example. At the operational level, the center of gravity for the Iraqi Army was the Republican Guard formations in northern Kuwait and Southern Iraq. By attacking and destroying these forces through air and



ground attacks, the allied coalition defeated the Iraqi ability to effectively respond or defend itself.

The enemy operational center of gravity provides an objective for operational maneuver. Since a center of gravity is a source of strength we conduct operations against areas or facilities that will directly affect the center of gravity.

The second concept of operational design is *lines of operation*. Lines of operations describe the directions that friendly forces will take in relation to the enemy center of gravity. <sup>35</sup> Lines of operation provide linkage between the force and its base of operations and sustainment. Willoughby noted the importance of this concept in 1939. He considered "direction" to be one of two "... major elements in the structure of maneuver." <sup>36</sup>

The operational commander applies Liddell Hart's "distributed strategic advance," by positioning different forces along various lines of operation. Operational distribution along lines of operation creates deception, surprise, flexibility, and concentration.

I have already briefly mentioned the final concept of operational design, *culminating points*. Culminating points are times or locations at which units cannot continue to attack with superior combat power. The obvious goal is to reach an objective before reaching a culminating point. Operational planners must carefully estimate the necessary resources for an operation to prevent premature culminating points. 37

GEN Schwartzkopf's post campaign briefing highlighted two key measures taken to prevent a premature culminating point. First, support units stockpiled 60 days of supplies to sustain the force. Second, mobile forces, like the 101st Airborne Division (Air Assault), established sustainment bases well forward of the main mechanized formations to ensure their continued advance.

## Products of Maneuver

When used with the key concepts of operational design and supported by the other operational functions, maneuver produces three effects that support the accomplishment of operational objectives.

First, operational maneuver provides the means to gain mass. Mass implies a high density of forces to terrain and a high density of weapon systems to targets. The operational commander moves his forces in separate, but synchronized, directions to arrive at a decisive time and place of his choosing. This results in the concentration of forces for decisive employment of combat power. Willoughby recognized the importance of mass in his discussion of "Distribution of Forces." He says:

The idea (Distribution of Forces) is variable and could be expressed in still another form, such as: The ratio of offensive effort to the defensive; the sequence and degree of effort during combat; combat or troop density per yard of front; the proportion between troops engaged and troops in reserve. In its final meaning, it aims at the *creation of mass* 38

Second, operational maneuver threatens the enemy's center of gravity. By exposing the enemy center of gravity to defeat, the operational commander forces the enemy to take actions to protect or abandon his position. In conjunction, the operational commander distributes his forces in a manner that conceal and protect his own center of gravity. Threatening the enemy center of gravity provides the "...moral dominance which enable smaller forces to defeat larger ones." 39

Finally, operational maneuver allows the commander to place forces in the best possible conditions or dispositions from which to fight. In doing so, he creates the "leverage" proposed by Richard E. Simpkin in his book Race to the Swift. Leverage allows the operational commander to fix the enemy mass (E) with a holding force (H), while maneuvering a large mobile force (M) to make the enemy's position untenable. Speed and momentum increase the effects of leverage. Graphically depicted, leverage appears as follows:

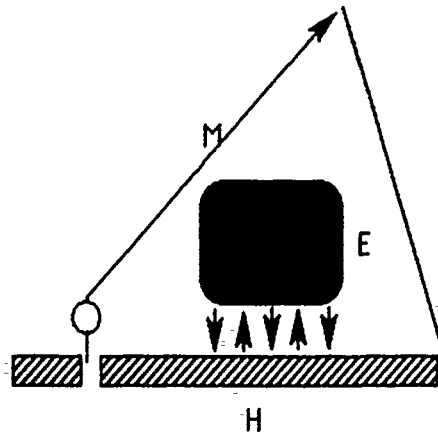


Figure 8, Simpkín's concept of leverage 40

### Doctrinal Conclusions About Operational Maneuver

From the discussion above it is possible to draw doctrinal conclusions about operational maneuver. These conclusions are necessary since they will provide primary means of identifying the characteristics of successful operational maneuver. The conclusions are as follows:

1. As a doctrine, AirLand Battle places a premium on *initiative*, *synchronization*, and *offensive action* throughout the depth of the battlefield.

2. Operational maneuver is how *ways* (concepts) and *means* (resources) combine to accomplish *ends* (objectives). There is a distinctive link between conducting operational maneuver and accomplishing strategic objectives.

3. Operational maneuver is the *advantageous positioning of forces in relation to the enemy's operational center of gravity prior to or during combat*. Operational maneuver has two purposes.

(a) It *constrains the actions of the enemy* while expanding friendly *freedom of action*.

(b) It *creates favorable conditions* for subsequent tactical exploitation. Operational maneuver *sets the terms* for immediate and future battle. It allows for the *creation of leverage* over the enemy.

4. Operational maneuver requires the commander to deploy and *concentrate the mass and strength of his forces* to threaten the enemy's operational center of gravity.

5. Operational maneuver requires *anticipation* prior to combat and *flexibility* of thought and response during combat.

## Characteristics of Successful Operational Maneuver

Using the conclusions identified above and the screening criteria in chapter one, I believe there are two characteristics of successful operational maneuver. These characteristics are *mass* and *offensive action*.

With respect to the first screening criteria, significance, both characteristics are notable by their inclusion in the principles of war and their detailed discussion in doctrine. As the corollaries will display in later discussion, both characteristics create synergism.

To meet the requirements of the second criteria, both characteristics produce direct effects on the enemy center of gravity.

The characteristics meet the third criteria easily since both are principles of war. As I will discuss later, several of the corollaries associated with the characteristics are also principles.

Finally, these characteristics show enduring quality. The historical examples in the thesis introduction chapter offer one way of displaying the validity of these characteristics. The next chapter, however, will clearly demonstrate the validity of these characteristics.

## Mass

The first characteristic of operational maneuver is mass. In its broadest sense, mass implies the concentration of force and assets to generate combat power against the enemy. The corollaries in figure nine add detail to the concept of mass.

In order to gain mass, commanders must use economy of force at other locations. This allows the availability of forces to concentrate at a more decisive area. Economy of force implies taking risk. In assuming economy in one sector, the commander also assumes risk that gains made by concentration elsewhere will offset potential losses.

### **COROLLARIES OF MASS**

1. Requires economy of force, risk taking, and surprise
2. Threatens the enemy center of gravity
3. Requires the ability to move and exercise mobility
4. Requires distribution of forces along lines of operation
6. Occurs throughout the depth of the battlefield
7. Considers culminating points

Figure 9, Corollaries of Mass



Risk also implies bold action. A commander who observes a situation which he can exploit and then does so with aggressive and concentrated action exhibits risk through bold action.

Surprise results from bold action, risk, economy, speed of action, and unexpectedness. Surprise enhances the effects of concentration and threatens the ability of the enemy commander to act quickly to respond to a sudden situation confronting him. Surprise offers the opportunity to generate combat power quickly while the enemy is unprepared. Surprise is, however, temporary and commanders make every opportunity to capitalize on it.

Mass must occur at locations that promise to bring success. The definition proposed for operational maneuver requires its accomplishment in relation to the enemy operational center of gravity. The massing of forces must, therefore, occur in an area that threatens the operational center of gravity for the enemy.

Movement and mobility allow accomplishment of mass. Operational maneuver frequently requires that forces be moved or shifted within the area of operations. Mobility includes the physical assets (transport) and the

mental capacities (anticipation, intelligence, and initiative) to get forces to the right location in a timely manner.

Whether moving or stationary, distribution of forces will occur along lines of operation. Lines of operation allow for maintaining lines of sustainment, reinforcement, or subsequent movement. Distribution of forces allows the commander to move or position his forces so that they present the greatest threat to the enemy. He accomplishes this by threatening multiple flanks; threatening encirclement or cut-off; forcing the enemy to spread his forces to meet multiple or broad threats; or, using the depth of the battlefield to threaten him in multiple locations.

Finally, massing of resources allows the operational commander to prevent reaching untimely culminating points. Combat, combat support, and combat service support forces must be distributed with sufficient depth (in forces and resources) to achieve objectives before forces and supplies culminate.

## Offensive Action

The second characteristic of operational maneuver is offensive action. In its broadest sense offensive action implies that maintenance of initiative is essential for attaining objectives. 41 Like the previous characteristic, offensive action also has corollaries. (See figure 10)

### **COROLLARIES OF OFFENSIVE ACTION**

1. Requires initiative, anticipation, and flexibility
2. Sets the terms for tactical exploitation
3. Constrains enemy actions while maintaining friendly freedom of action
4. Creates leverage against the enemy operational center of gravity

Figure 10, Corollaries of Offensive Action

Commanders must anticipate actions on the part of the enemy. This is particularly true at the operational level. The operational commander distributes his forces based on continuous estimates of the intentions and capabilities of the opposing commander. Correct estimates enhance the

decisive impact of operational maneuver. Incorrect estimates, however, may lead to a catastrophic failure of the operation.

Flexibility impacts on initiative because the commander must possess the ability to adjust his ways (concepts) and means (resources) to accomplish his ends (objectives). This may involve the retention of reserves or the ability to detect and then threaten by operational maneuver emerging areas of enemy weakness. Offensive action requires mental and physical flexibility.

Through offensive action and initiative, commanders attempt to set the terms from which tactical exploitation may commence. The operational commander attempts to get his tactical forces in the best positions that allow their tactical actions to be successful.

Offensive action seeks to deal the enemy a physical and mental blow that constrains his ability to act. Holding forces and enveloping forces are an example of this. By constraining the enemy's ability to act, the operational commander increases his ability to gain freedom of action. With the enemy's attention held in one direction, the commander is free to move in other directions that allow accomplishment of the objective.

Finally, offensive action creates leverage that ultimately leads to the defeat of the enemy. Referring to figure 8 (Simpkin's concept of leverage), leverage implies the movement of the friendly operational center of gravity in relation to the enemy's. This continuous movement into the depth of the enemy threatens him with being cut-off or encircled.

Operation Desert Storm demonstrated the strength and decisiveness of offensive action. Transitioning from a defensive posture to offensive action (via air and ground operations) brought the conflict to a quick close. With offensive action, a commander has the opportunity to exploit enemy vulnerabilities and achieve decisive results.

### Summary

In this chapter, I analyzed operational maneuver within the framework of our current AirLand Battle doctrine. The ultimate purpose of this chapter was to propose characteristics for successful operational maneuver. Two proposed characteristics are mass and offensive action.

I arrived at these characteristics by carefully analyzing the definition, roles, and outcomes of maneuver. I have also discussed the relationship of AirLand Battle to operational art and how maneuver affects the concepts of operational design.

In the following chapter, I will attempt to validate these characteristics and demonstrate their relevance in contemporary case studies. It is my belief that they will prove valid and relevant.

## Chapter 3 Endnotes

1 Department of the Army, FM 100-5, Operations, (Washington, D.C.: GPO, 1986), 6.

2 JCS Publication 3-0, Doctrine for Unified and Joint Operations (Test Pub), (Washington, D.C.: GPO, 1990), iii.

3 These problems were summarized from JCS Pub 3-0, Doctrine for Unified and Joint Operations, E-2.

4 FM 100-5, Operations, 22.

5 FM 100-5, Operations, 23.

6 FM 100-5, Operations, 40.

7 FM 71-100, Division Operations, and FM 100-15, Corps Operations discuss the BOS in detail. They are standard in instruction at all TRADOC school systems. Chapter 6 of TRADOC Pam 11-9, Blueprint of the Battlefield, also discusses BOS in detail.

8 FM 100-5, Operations, 11.

9 FM 100-5, Operations, 27.

10 Lykke, Arthur F., Jr., "Toward an Understanding of Military Strategy" in Military Strategy: Theory and Application (A USAWC reference text, June 1989), 3-8. Reprinted in USACGSC ST 20-15, Joint and Combined Operations (Selected Readings), August 90, 37-42.

11 FM 100-5, Operations, 10.

12 Willoughby, Charles Andrew, Maneuver in War, (Harrisburg: Telegraph Press, 1939), 40 (Reprinted by the US Army War College Art of War Colloquium, Nov 83).

13 Schroedel, Joseph, "The Art and Science of Operational Maneuver," (USACGSC SAMS Monograph: 1988), 2.

14 Schroedel, "The Art and Science of Operational Maneuver," 3.

15 FM 100-5, Operations, 12.

16 FM 100-5, Operations, 12.

17 Department of the Army, FM 100-7, The Army in Theater Operations (Initial Draft), (Washington, D.C.: GPO, 1990), 2-34.

18 Holder, L. D., "A New Day for Operational Art," Army, (March 1985), 151.

19 Marcy, Scott A., "Operational Art: Getting Started," Military Review, (Sep 90), 108.

20 Mr James J. Schneider suggested "constraining the enemy's ability to act while maintaining friendly freedom of action" during a discussion on 31 January 1991.

21 FM 100-7, The Army in Theater Operations, 2-34.

22 Newell, Clayton R., "Balancing Ends, Ways, and Means," Army, (August 1986), 1-19.

23 Holder, "A New Day for Operational Art," 148.



24 Liddell Hart, B.H., Strategy, 2d ed., (New York: Praeger, 1982), 325-24. This is also a reflection of Napoleonic maneuver. Napoleon's corps often marched independently of each other but would concentrate to fight collectively.

25 Franz, Wallace P., "Large Unit Maneuver," unpublished and undated document issued as a course reading for A332, The Operational Level of War, 4.

26 FM 100-5, Operations, 175.

27 FM 100-5, Operations, 11.

28 Morris, William, ed., American Heritage Dictionary, New College ed., (Boston: Houghton Mifflin Company, 1976), s. v. "system."

29 Department of the Army, FM 71-100, Division Operations, (Washington, D.C.: GPO, 1990), 1-17.

30 FM 100-7, The Army in Theater Operations, 2-31.

31 FM 100-7, The Army in Theater Operations, 2-32.

32 FM 100-7, The Army in Theater Operations, 2-47.

33 FM 100-5, Operations, 179.

34 Clausewitz, Karl von, On War, trans by O. J. Matthijs Jolles, (Washington, D.C.: Infantry Journal Press, 1953), 485-6.

35 FM 100-5, Operations, 180.

36 Willoughby, Maneuver in War, 40.

- 37 FM 100-5, Operations, 181.
- 38 Willoughby, Maneuver in War, 41.
- 39 FM 100-5, Operations, 12.
- 40 Simpkin, Richard E., Race to the Swift, (Oxford: Brassey's, 1986), 95.
- 41 FM 100-5, Operations, 173.

## CHAPTER 4

### CASE STUDIES

"Looking back is the surest way of looking forward."  
J.F.C. Fuller

"Yesterday's lessons underscore the morals of today."  
S.L.A. Marshall

#### Chapter Overview

The purpose of this chapter is to use historical case studies to analyze the two characteristics of operational maneuver proposed at the completion of chapter three. In using these case studies I intend to demonstrate the relevance of these characteristics and identify any other characteristics associated with operational maneuver.

The case studies selected for this thesis are combat operations

occurring since World War II. They involve German and Soviet, American and North Korean, and Arab and Israeli forces. I selected each of the case studies based on variety of operational settings, outcomes, doctrines, terrain conditions, and technologies. In selecting this variety of cases I intend to investigate the validity of these characteristics over differing situations.

I will present the case studies in chronological order to establish continuing relevance. I used a modified version of the Campaign Analysis Methodology [developed by the CSI at the CGSC] to analyze the case studies.

## Case Study # 1

### Manstein's Counteroffensive, February - March 1943

#### Scope

This case study will investigate operations conducted by the German Army Group Don (later designated Army Group South) under the command of Field Marshal Erich von Manstein. The actions took place in the region between the Donets and Dneiper Rivers in the USSR. The time frame for this case study extends from December 1942 to March 1943. The primary action took place between 19 February and 25 March 1943. <sup>1</sup>

#### Strategic and Operational Setting

This counteroffensive operation came as a result of sequential Russian offensives against the German Sixth Army (Paulus) at Stalingrad and against German Army Group A (Kleist) in the Caucasus. The Russian

offensive at Stalingrad resulted in the eventual destruction and surrender of the Sixth Army on 2 February 1943. 2 Having eliminated German forces at Stalingrad, Soviet forces had the advantage of superior forces and advantageous position with which to strike and cut-off the protruding Army Groups Don and A. 3

With renewed strength from allied resupply and increasing pressure on the Germans in the Italian theater, the Soviets adopted a strategic offensive in late 1942. Their purpose was to destroy as much of the German army as possible and establish favorable positions for resumption of the offensive in the spring. The Soviet operational objective was to "... amputate the southern wing of German forces and box it in the sea-coast." 4

Since commencing Operation Barbarossa in June 1941, Hitler changed German strategic and operational objectives frequently. His instructions to commanders on the eastern front shows evidence of this. The initial aims of the 1942 campaign were to occupy the northern Caucasus oilfields and establish a defensive line along the Don River from Stalingrad to Voronezh. Once operations began, Hitler quickly added the occupation of

Stalingrad as an objective. <sup>5</sup> The piecemealing of German forces that ensued placed extraordinary limits on accomplishing the objectives successfully. It is clear from a strategic standpoint, however, that the German intention was to maintain a hold on gains made during the 1942 campaigns. Convinced that he needed the Caucasus for oil resources and Stalingrad for political and psychological reasons, Hitler adopted a policy of not yielding terrain. With the fall of Stalingrad, the growing threat to Army Group A, and the increasing effectiveness of Soviet offensives, Manstein identified his operational aim as bringing "... defeat underfoot." In doing this he felt that an effective counteroffensive could destroy a large amount of Soviet forces and establish political conditions that would make a stalemate on the eastern front possible. <sup>6</sup> A successful operation would also restore the front along the Donets River from the Slavansk area to Belgorod. <sup>7</sup>

The ratio of theater forces is clearly in favor of the Soviets. Manstein estimated that the 32 divisions under his control opposed 341 formations consisting of rifle divisions, cavalry divisions, and armored

brigades. <sup>8</sup> The Soviet advantage in manpower was nearly a ratio of 3:1. At the start of operations the Soviets out-numbered the Germans in tanks and guns by ratios of 4:1 and 3:1 respectively. <sup>9</sup> In terms of air power, the German Fourth Air Force had 950 planes and was able to generate an average of 1000 sorties daily between 20 February and 15 March. <sup>10</sup> Soviet air forces had approximately 1275 aircraft. <sup>11</sup>

MG F. W. von Mellinthin, Chief of the General Staff, 48th Panzer Corps, provides a glimpse of the battleground in his book Panzer Battles.

The terrain was almost completely open, slightly undulating, and cut here and there by narrow brooks which were then completely frozen. It resembled the area west of Stalingrad, and indeed was very much like the North African desert. Russian columns ... were visible at a distance of eight to twelve miles ... <sup>12</sup>

Figure 11 provides an overview of the operational setting during the period 16 December 1942 to 19 February 1943.





## Operational Plans and Execution

Following the capitulation of Sixth Army at Stalingrad, the Soviets continued to develop their offensive. In the South, their primary objective was the recapture of Kharkov. Marshal Zhukov, coordinating actions for the *Stavka*, directed the Soviet main effort against Army Group Don. The *Southwest Front* (Vatutin) attacked to seize crossings in the central Donets River area. The *South Front* (Malinovskiy) applied pressure against Army Group Don and Army Group A positions forward of Rostov. Further to the North, the *Voronezh Front* (Golikov) and *Bryansk Front* (Reiter) attacked in the direction of Kursk and Kharkov.

By the middle of January 1943, Soviet attacks against the 2d Hungarian Army south of Voronezh resulted in a 175 mile gap between Army Group B and Army Group Don.<sup>14</sup> With this gap created, Soviet forces aimed at seizing crossings on the Dneiper River and threatening the main supply routes for Army Group Don.<sup>15</sup> Figure 12 illustrates the extent to which Soviet forces threatened Army Group Don. With Hitler insisting that Rostov

stay open with forces south of the Don River, Manstein's position was extremely precarious. <sup>16</sup> Hitler responded to Manstein's queries about his northern flank by promising a two-division offensive against Kharkov. <sup>17</sup> With the loss of Army Group B forces to protect his flank, Manstein continually extended his protection to the west to keep up with the advancing Soviets. When the promised counteroffensive never materialized and after much discussion, Hitler finally gave permission to Manstein to conduct a withdrawal designed to shore-up his positions. <sup>18</sup> With this permission came a reorganization of forces by combining Army Group Don and Army Group B under Manstein to form Army Group South. <sup>19</sup>

What follows the reorganization of Army Group South is a series of withdrawal operations to create conditions from which to launch a successful counteroffensive. In the South, Army Detachment Hollidt withdrew north of the Don River and established positions along the Mius River. North of Army Detachment Hollidt, First Panzer Army stopped the Soviet advance by occupying positions on the western side of the Donets River. North of the gap, Army Detachment Lanz (later Army Detachment

Kempf) withdrew from Kharkov and established positions to the southwest.

20 Manstein intended then for the Fourth Panzer Army and II SS Panzer Corps to attack in concert towards Pavlograd.

Manstein's counteroffensive would entail several critical events.

(See figure 12) First, an economy of force operation with Army Detachment Hollidt would prevent enemy penetration on the Mius River.

Second, First Panzer Army and Army Detachment Kempf would defeat enemy forces already between them to maintain access to crossing sites on the Dneiper River. 21 Finally, the counteroffensive would have to defeat the attacking forces in the Kharkov area. 22 Fourth Panzer Army would be the primary striking force. First Panzer Army would cooperate with supporting attacks on its eastern flank as it moved north.

Army Detachment Kempf would cooperate with supporting attacks on the northern flank of Fourth Panzer Army as it closed on Kharkov.

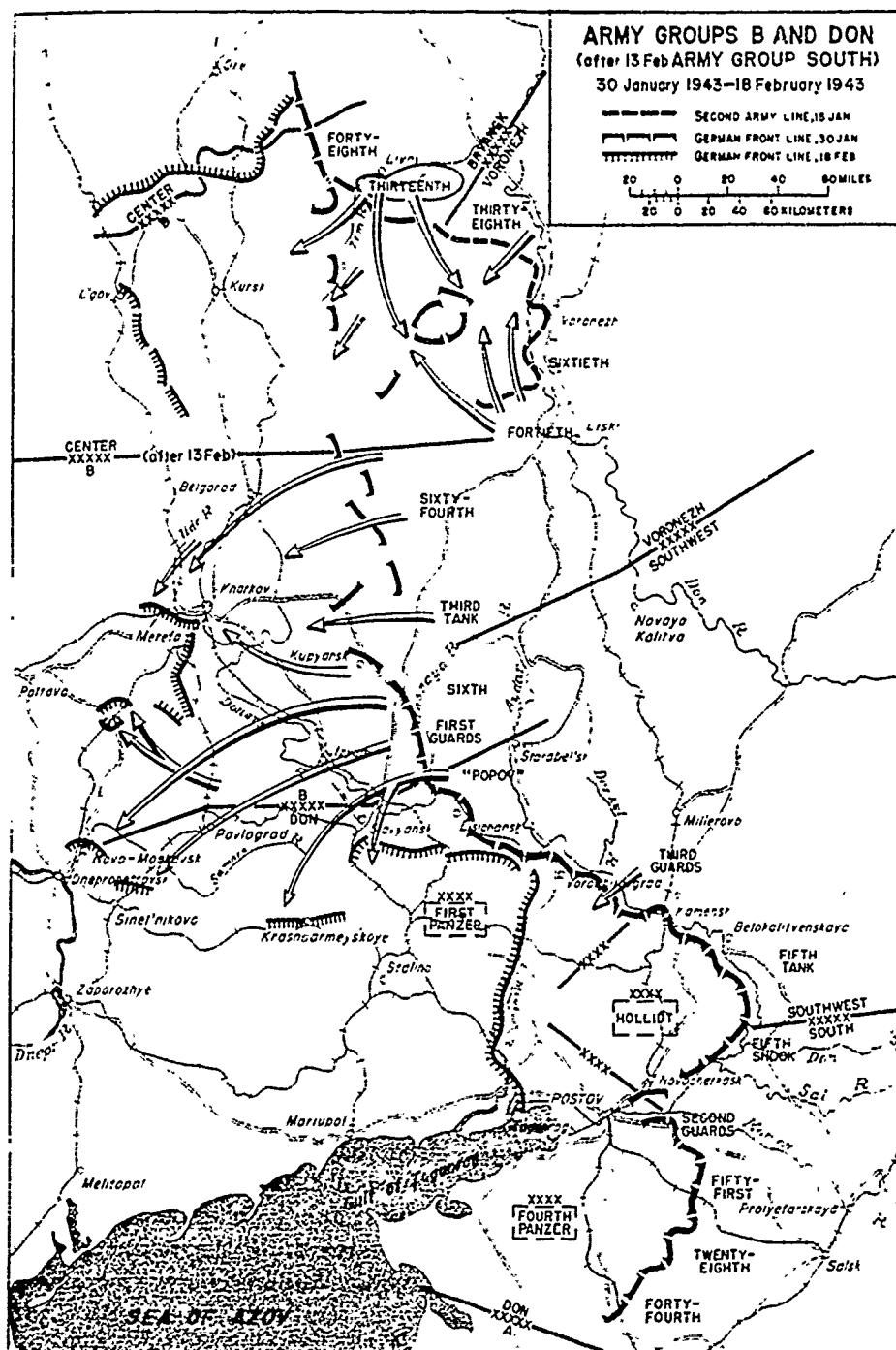


Figure 12, Soviet Penetrations 23

## The Ground Battle

The Battle between the Donets and Dneiper Rivers commenced on 19 February 1943. By the 21st, Fourth Panzer Army seized Pavlograd. Having defeated major forces in this area, it was now possible for Fourth and First Panzer Armies to cooperate and defeat four Soviet corps. <sup>24</sup> The successful defense along the Mius River and the defeat of forces west of the Donets temporarily caused the Soviets to stop their offensive and as a result passes the initiative to Manstein.

On 25 February, Manstein issued orders to continue the counteroffensive. His goal was now the Soviet forces in the Kharkov area. He ordered First Panzer Army to attack and close the Soviet crossing sites on the Donets River. He tasked Fourth Panzer Army to attack northeast to Lozovaya, then turn north and attack along the railroad to Kharkov. <sup>25</sup> In the course of a week, Fourth Panzer Army attacked over 50 miles and captured or destroyed three rifle divisions and three tank brigades. <sup>26</sup>

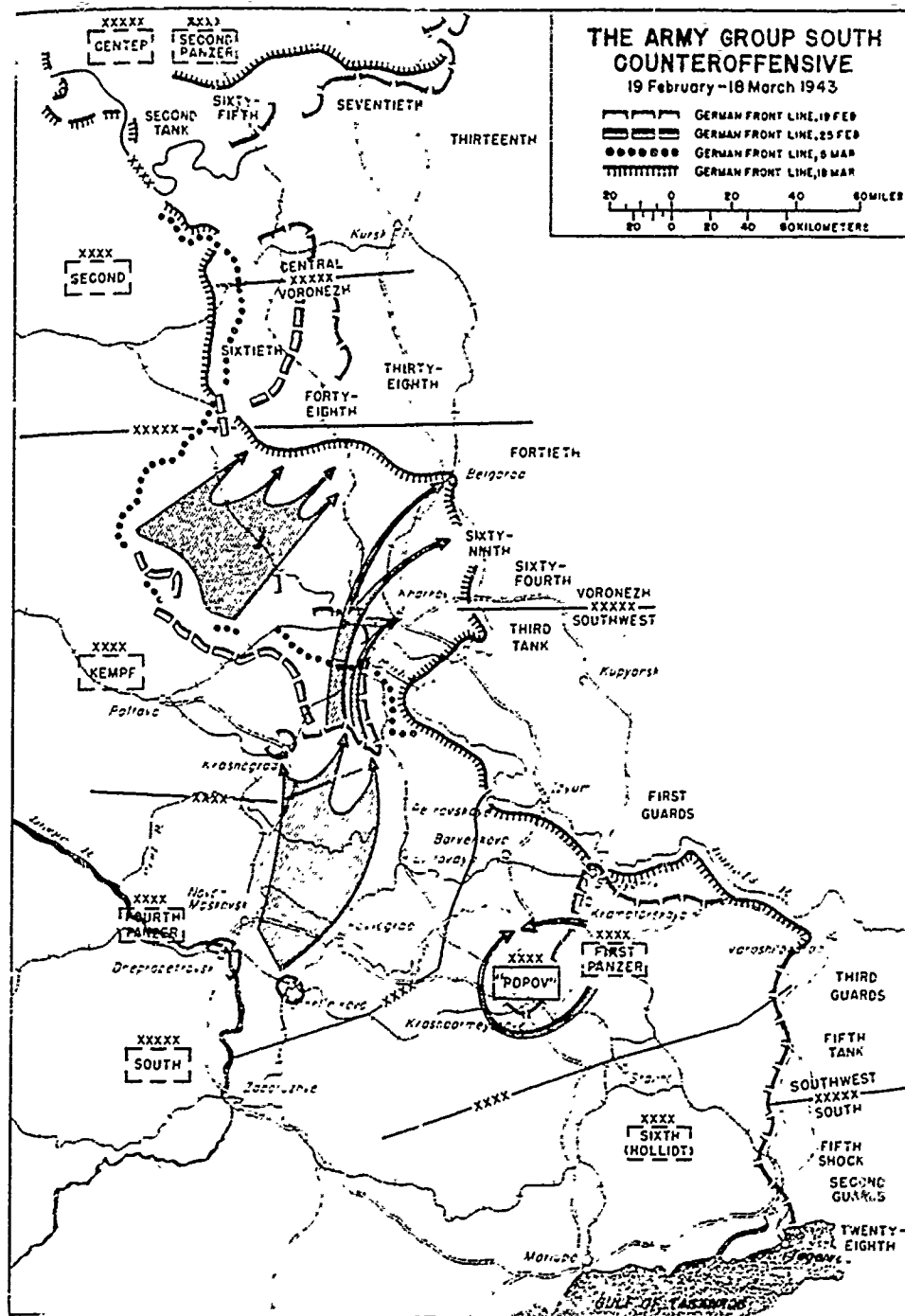


Figure 13, The Counteroffensive 27

By 11 March, II SS Panzer Corps recaptured Kharkov and resistance by the *Voronezh Front* stopped. Fourth Panzer Army continued to attack and by 18 March, captured Belgorod and re-established defenses along the Donets River. 28 With the re-establishment of these defenses, Manstein achieved his operational objectives. (see figure 13)

### The Air Battle

Luftflotte 4 (FM von Richthofen) was the major air organization in the Army Group South theater of operations. Under his command Richthofen had Fliegerkorps I and IV (positioned at Poltava and Dnepopetrovsk respectively) and Fliegerdivision Donetz at Stalino. 29

The main air effort belonged to Fliegerkorps IV tasked to support the movement of First and Fourth Panzer Armies toward the Donets River southeast of Kharkov. Fliegerkorps I supported operations against Kharkov from the northwest. Richthofen tasked Fliegerdivision Donetz to the defensive effort southeast of First Panzer Army. He shifted their effort to



support Fliegerkorps IV as soon as the main ground counteroffensive started. 30

The majority of German air sorties flew in close support of ground forces. Richthofen diverted some air units to interdict Soviet railways transporting reserves and supplies. 31

The success enjoyed by Richthofen's forces resulted from the flexible manner in which he employed and concentrated them. Both his major air units (Fliegerkorps I and IV) "... were instructed to make sure that their subordinate units could be brought to bear immediately in either command's operational area." 32

### Operational Conclusion

With the completion of the Winter Campaign, the initiative is in the hands of the Germans, the Soviets are dealt a serious defeat, and the front is stabilized offering the chance of a draw in the east. 33

## Analysis of Operational Maneuver

### Mass

Mass played an important role in the overall success of this operation. Manstein's ability to reposition forces, use economy, and take risks allowed him a victory of decisive proportions.

It is apparent from all literature that the Soviets possessed overwhelming numbers. Manstein, however, was able to mass the preponderance of his forces at locations that allowed his numerically inferior forces to generate superior combat power against the enemy.

The air effort contributed significantly to Manstein's ability to mass. By concentrating close air support with the main attacking forces (First and Fourth Panzer Armies), Manstein generated overwhelming combat power at a Soviet vulnerability.

Economy of force and bold risk-taking are apparent. Manstein's decision to hold the Mius River line with Army Detachment Hollidt allowed the repositioning of First and Fourth Panzer Army to locations from which

they could strike the Soviet penetration. Economy of force was also apparent on the northern flank with Army Detachment Kempf. This element essentially held the area southwest of Kharkov as the northern flank of the Soviet penetration. In doing so, they prevented overwhelming forces from the northern *Voronezh Front* armies and southern *Central Front* armies from cutting off Army Group South in the west.

German air forces also exercised economy and risk. By early February 1943, 53% of available German operational aircraft were in the Army Group South area of operations. <sup>34</sup> In concentrating this amount of aircraft the Germans essentially surrendered air superiority in other theaters of operation.

Perhaps most striking in this operation is Manstein's bold risk-taking. He allowed Soviet forces, at one point, to penetrate within miles of his own command post. <sup>35</sup> Manstein positioned no major forces to stop the Soviet penetration prior to launching the counteroffensive. Manstein's risk-taking paid off greatly. In allowing the Soviets to continue thinking their penetration was meeting unopposed success Manstein lengthened their lines

of operation and exposed key vulnerabilities. His careful positioning of forces allowed him the opportunity to take advantage of this vulnerability and strike decisively.

Manstein's operational movement prior to battle, clearly allowed him to threaten the Soviet center of gravity [forces advancing toward Dneiper River crossings]. By focusing and striking exclusively at the enemy's operational center of gravity he achieved a victory which secured the strategic objective.

Another striking feature of mass builds on the operational mobility concept. Through mobility, Manstein was able to shift his forces from less threatened areas to obtain decisions in other locations. Manstein demonstrated this in two ways. First, he demonstrated the flexible thought process needed for mobility. His ability to interpret intelligence, foresee opportunities, and communicate concepts in a clear and concise manner inspired subordinate leadership and provided the impetus to set the "operational stage." Second, Manstein was able to use his flexible organizations (Army Detachments, Panzer Corps, Panzer Army HQ), existing communications networks (railways, roads, airfields), and inherent mobility

(tanks, half-tracks, and trucks) to get his force into the right positions. Manstein's "castle to the left," from the Caucasus back west of the Mius River line [a distance of over 250 miles, conducted in two weeks, under enemy pressure], demonstrates the agility with which his forces could respond. 36

The flexibility of air assets also contributed significantly to operational mobility. FM von Richthofen issued orders to his subordinates to cooperate with each other and with ground forces to generate the greatest combat power possible. Richthofen shifted his air effort on a number of occasions to ensure close and continuous support of the ground forces.

Manstein and his subordinates maintained interior lines of operation throughout the operation. Manstein's distribution of forces along limited lines of operation allowed him to attack with the preponderance of his forces without committing forces to protect long lines of sustainment. His direction of attack limited exposure of his lines to enemy attack.

From their attack positions Manstein's air and ground forces attacked on narrow fronts into the depth of the Soviet penetration. In doing

so, they gained local superiority and were able to cut-off the Soviet penetration in a relatively short time.

Finally, Manstein accomplished his operational objective of bringing "... defeat underfoot," by restoring the German defense along the Donets River without reaching a culminating point. Short, direct lines of operation, organization of forces in depth, and massing of forces prevented premature culmination of the attack.

Mass [and its corollaries] is clearly a significant characteristic of this successful operation. Combining a sound maneuver concept with economy of force, bold risk-taking, and superior mobility, Manstein accomplished his operational objective and provided Hitler with the best possible strategic situation in the east.

### Offensive Action

Offensive action is the second characteristic of successful operational maneuver. Like mass, offensive action also played an important role in this operation. Most striking, within the context of this case study,

is the emphasis on an operational offensive in the course of a strategic defensive. Manstein exerted considerable pressure on Hitler to convince him of the need to yield terrain in order to create an exploitable situation.

The most important features allowing Manstein to achieve offensive actions are his initiative and flexibility. By seeing opportunities to destroy massive Soviet forces and then exercising mental and physical flexibility to get forces into advantageous positions he was able to:

1. Choose the time and place of his counteroffensive.
2. Force the Soviets to react to him, rather than vice versa.

Manstein's operational movement during the first half of February 1943 set the terms from which tactical commanders could achieve the operational objective. He placed air and ground units in locations from which they could strike and destroy Soviet forces or support forces doing so.

His strong hold on the shoulders of the penetration helped to constrain the enemy's ability to act. By waiting for major forces to penetrate, Manstein exploited speed and surprise to limit the Soviet responses. The result, according to MG F. W. von Mellenthin, was a high

degree of panic on the Soviet side. 37 With the successful severing of the penetration, initiative passed to the Germans. Manstein's continuation of the offensive to Kharkov and the Donets River line further limited Soviet response while providing increased freedom of action for his own forces.

The overtly offensive use of air assets also contributed to Manstein's overall success. By striking at targets in depth (railways) and concentrating assets for close support to ground units, Richthofen's Luftflotte helped to maintain the operational initiative.

Finally, the attack directions of Fourth Panzer Army created "leverage" that, as the German attack continued north, continually made the position of the Soviet operation center of gravity untenable.

Offensive action is a key characteristic of this successful operation. Manstein's ability to anticipate the operation and then take deliberate actions to create conditions to ensure its success is particularly noteworthy. Manstein's offensive spirit, as opposed to Hitler's defensive mentality, played a major part in this success.



## Case Study # 2

### "Citadel"- The German Offensive at Kursk, July 1943

#### Scope

This case study will investigate operations conducted by German Army Group South (Manstein) and Ninth Army (Model) against Soviet Forces in the Kursk Salient. German controlled salients in the Orel and Kharkov regions bordered the Kursk Salient to the north and south respectively.

As an example of operational maneuver, Operation Citadel is a failure. It is important to look at this operation to understand why the Germans did not achieve the characteristics of successful operational maneuver. Of particular note in this case study is the role of leaders charged with developing the disastrous strategy that led to the failure of Citadel.

## Strategic and Operational Setting

From the German standpoint the disposition of forces at the conclusion of the 1942-43 Winter Campaign necessitated the development of Operation Citadel. (Refer to figure 13 of the previous section and note the German front line on 18 March 1943) As recalled from the previous case study, the German Army successfully closed the winter campaign with the initiative in their control and with the Soviet Army reeling from a major defeat. Originally developed as the third in a series of envelopments designed to consolidate German defenses in the east, Citadel had far-reaching operational and strategic aims. <sup>38</sup> In the specific theater of operations, the Germans wanted to maintain the initiative and shorten up their defensive lines by eliminating the Kursk Salient. Successful offensives at the start of the 1943 summer campaign would also help to keep the Soviet Army "off balance." <sup>39</sup>

At the strategic level, Hitler wanted a decisive victory in the south to consolidate his defenses and free forces to strengthen German resolve in

the Baltic and Northern European areas. Ideally, this would help to consolidate the entire eastern front and allow German forces to react to allied incursions in the Mediterranean. <sup>40</sup> It appears that Hitler's objectives changed by summer. A summary of the message he sent to battlefield commanders highlights his final reasons for Citadel.

It would not only strengthen the morale of the German people and make the rest of the world 'take notice,' it would also instill new confidence in the German soldiers. Germany's allies would gain faith in the final victory, and the neutrals would be admonished to behave with caution and restraint. The victory would snatch the initiative away from the Soviet Union for the foreseeable future and could have extensive, 'if not decisive,' effects on the morale of the Soviet soldiers. <sup>41</sup>

For their part, the Soviets clearly recognized the inherent vulnerability of the Kursk Salient. Their response was to prepare a defense of great operational depth with which to absorb an attack. <sup>42</sup> In a section of his book, Decisive Battles of the Twentieth Century, John Erickson describes the Soviet operational and strategic aims.

The strategic objectives of the Red Army's own summer-autumn offensive had meanwhile been determined: German forces were to be pushed back to a line running from

Smolensk to the River Sozh and the middle and lower reaches of the Dneiper, and the 'Eastern Wall' was to be breached and German forces in the Kuban eliminated, but the main Soviet thrust would be along a southwesterly axis to liberate the industrial region of the Donbas and the eastern Ukraine. A second offensive would also be aimed due west to liberate eastern Belorussia and annihilate Army Group Centre. *But first the Red Army would stand and fight in the Kursk salient* [Emphasis is mine] 43

The Soviets, while preparing for a strategic offensive, choose to fight an operational defensive.

The accumulation of forces around the Kursk Salient is truly impressive. The ratio of forces is clearly in favor of the Soviets. Multiplying the numerical advantage were: extensive preparation of their positions; an effective spy network that provided key information on plans and dispositions; and the lack of any German deceptive effort. 44

The Germans had Ninth Army (Model) attacking from the Orel salient with three panzer corps and one rifle corps consisting of seven panzer divisions, two panzer-grenadier divisions, and nine infantry divisions. The weight of the German effort was in the southern attack with Manstein's Army Group South. At his disposal he had Fourth Panzer Army (Hoth), Army Detachment Kempf, and the XXIV Panzer Corps comprising a total of ten

panzer divisions, one panzer-grenadier division, and seven infantry divisions. <sup>45</sup> Holding the central position against the salient was Second German Army (Weich) with seven infantry divisions. <sup>46</sup>

In the north and south, there were 730 and 1100 combat aircraft respectively. Of these aircraft, only about 600 were fighters. The changing strategic situation in the west and in the Mediterranean resulted in the diversion of over 50% of available fighters to these areas. All totaled the Germans had 2500 tanks and assault guns. <sup>47</sup>

Opposing the Germans in the north was the *Central Front* (Rokossovsky) consisting of five rifle armies, one tank army, and one "air" army. A total of 5000 guns and 1120 tanks opposed Model. To the south was the *Voronezh Front* (Vatutin) consisting of the same organization of armies. A total of 6000 guns and 1500 tanks opposed Manstein. As a reserve, the Soviets possessed the *Steppe Front* (Konev) consisting of four rifle armies, one Guards tank army, and an air army. <sup>48</sup> The extensive preparations of the Soviet positions by July 1943 are worth noting.

In the main line of resistance, 2 to 3 miles deep, the armies had dug three to five trench lines and built weapons emplacements and dugouts. At depths of 6 and 18 miles, they had constructed similar secondary lines. Behind those, the first about 25 miles back, lay another three lines that constituted the *front* defense zone. The *Central Front* alone, using troops and local civilians, had dug over 3,000 miles of trenches. Every village and every hill in the steppe had been fortified, and in the fields, that summer mostly overgrown with grass and thistles, the engineers had set 400,000 mines. 49

MG F. W. von Mellenthin provides a tactical view of the battlefield terrain.

The terrain, over which the advance was to take place, was a far flung plain, broken by numerous valleys, small copses, irregularly laid out villages, and some rivers and brooks; of these the Pena ran with a swift current between steep banks. The ground rose slightly to the north, thus favoring the defender. Roads consisted of tracks through the sand and became impassable for all motor transport during rain. Large cornfields covered the landscape and made visibility difficult. All in all, it was not good "tank country," but it was by no means "tank proof." 50

Figure 14 provides an illustration of the operational setting for the battle as well as the German concept.

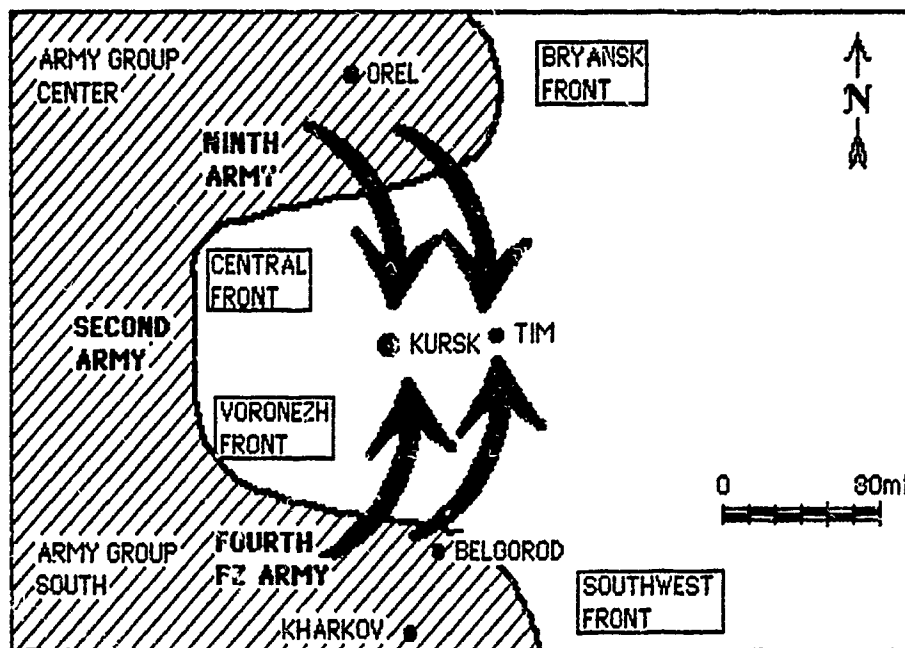


Figure 14, Operational Setting and Citadel Concept 51

### Operational Plans and Execution

With the original intention to launch Citadel in April, the start of the operation did not occur until 5 July 1943. Two factors impacted on Hitler delaying the start of the offensive. First, poor weather through April forced the postponement of the operation. Second, Model's desire to

reinforce his Ninth Army with Panthers, Tigers, and Ferdinand tanks forced delays throughout May and June. Field Marshals Manstein and Kluge (Army Group Center) opposed these delays to the operation. 52

### The Ground Battle

The offensive commenced on 5 July with Ninth Army and Army Group South in the north and south respectively. (See figure 15) In the early days of the operation, Model's army broke through the first defensive line and forced a penetration in the second defensive line west of the Orel-Kursk railroad with the XXXVII Panzer Corps. By the 6th, Model's force gained 13 miles. 53 To the south, the Fourth Panzer Army attacked with two corps on a 30 mile front and shattered the first defensive line within two hours. The advance continued in a satisfactory manner despite rainy weather and extensive minefields that slowed II SS Panzer Corps and Army Detachment Kempf. By the end of operations on the 6th, Manstein's force gained 25 miles.



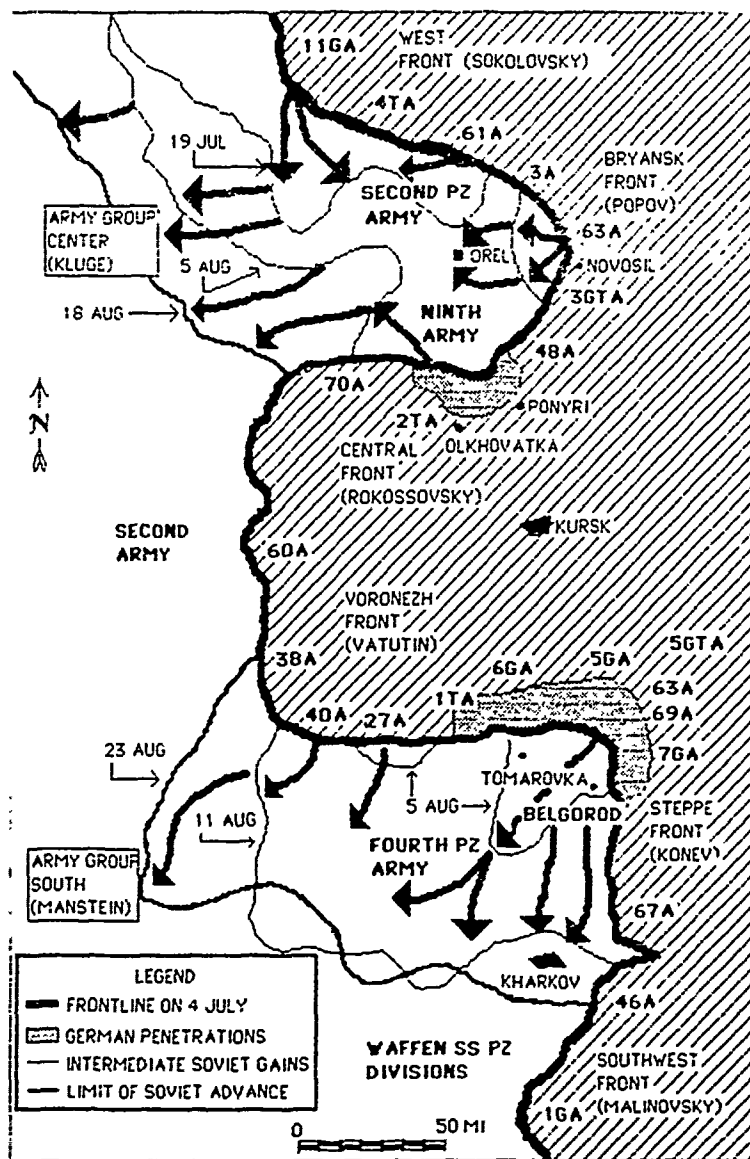


Figure 15, The Battle of Kursk 54

The opening days highlighted a problem that would constrain the Germans throughout the operation. The Luftwaffe's failure to gain and maintain air superiority prevented air support across the attacking fronts. Despite their generation of up to 3000 sorties a day, the Luftwaffe was unable to prevent Soviet aircraft and forces from interdicting German units. 55

Success in the opening days of the operation forced the Soviets to commit significant reserves on the 7th to stop the German gains. In the north, Rokossovskiy committed two tank corps and a rifle corps. In the south, Vatutin reinforced his second defensive line with two tank corps from the *Stavka* reserves. 56 The result was a slowdown of attacks in the south and the actual stoppage of Model's attack. Forced to stop and regroup, Model failed in two attempts to breakthrough the second defensive line on the 10th and 11th. Field Marshal Kluge decided to assist Model and began arrangements for an additional panzer and infantry division to reinforce his effort. To the south, Army Detachment Kempf's slow going in the early days caused a break in contact between it and Fourth Panzer Army. The rift

forced Fourth Panzer Army to divert an SS Panzer division to cover its eastern flank. Mechanical problems with the new German tanks also contributed to a slowdown during this phase of the operation. 57

The Soviets, now confident that they contained the bulk of the German attack, launched a major offensive of their own. The *Bryansk Front* (Popov) and *West Front* (Sokolovskiy) launched an attack against the northern Orel salient. In this area, the German's widely dispersed Second Panzer Army covered a front of over 170 miles. Reacting to this situation, Field Marshall Kluge cancelled plans to reinforce Model. Instead, he dispatched additional divisions and equipment, to include two panzer divisions and Ferdinand tanks from Model's army, to the Second Panzer Army. 58 Model lost any opportunity to continue the attack as a result of the Soviet counteroffensive.

In the south, Manstein's forces regained the initiative from Soviet reserves and pushed north. Concluding that Vatutin committed all his reserves Manstein then committed his, the XXIV Panzer Corps, in the vicinity of BELGOROD to give additional combat power for the attack to Kursk.

Despite the eventual commitment of two Soviet armies, Kempf's III Panzer Corps continued to progress and on the 13th encircled a large Soviet force between itself and the right flank of Fourth Panzer Army.

Despite the progress in the south, Hitler, in the presence of his two Army Group commanders, cancelled Citadel on 13 July 1943. Hitler provided three reasons for stopping the operation. First, the Soviet counteroffensive on the northern Orel salient was threatening a major breakthrough. Second, Soviet build-up in the south threatened the Donets Basin. Third, and perhaps most importantly, the successful allied landings in Sicily forced Hitler to divert troops to protect Italy and the Balkan countries. Hitler allowed Manstein to continue his operations in a limited fashion to defeat as many Soviet forces as possible.<sup>59</sup> This effectively concluded Operation Citadel. From this point forward, German forces resumed defensive operations to slow the continuing Soviet offensives.

## The Air Battle

In May 1943, a general redistribution of Luftwaffe air assets occurred in order to meet potential Soviet offensive threats. For this particular operation, Luftflotte 4 (GEN Dessloch) reinforced with Fliegerkorps VIII occupied positions in the Kharkov/Belgorod area to cover the southern portion of the salient. Luftflotte 6 (GEN von Griem) occupied positions between Smolensk and Orel to cover the northern flank of the Kursk Salient. 60

Luftwaffe operations commenced in late June with deep air raids against Soviet industrial targets. They followed these operations with shallow strikes on airfields and railways just behind the Soviet lines. Kursk was a major target of these shallow raids. The Soviets responded to German air attacks with strikes of their own against the railway stations used for transport of German reserve forces. Early German air strikes caused the loss of surprise as the Soviets suspected a German offensive was near. 61

With nearly 50% of all operational aircraft committed to the Kursk operation, the Luftwaffe generated up to 3000 sorties per day in the opening phase. The Soviet Air Force, with extensive allied resupply and recovery time, was equal to challenging the Luftwaffe. By the end of the first week, the number of daily German sorties decreased by half. Given the added strength of the Soviet Air Force, and its own diminished resources, the Luftwaffe was unable to establish air superiority. 62

A concentration of close support aircraft in support of Manstein's pincer contributed to initial successes in the south. 63

When the Soviets, however, begun launching counterattacks against Orel in the north and the lower Donets Basin in the south, the Luftwaffe had to divert aircraft to counter these advances. As W. H. Tatum and E. J. Hoffschmidt conclude in their book, The Rise and Fall of the German Air Force:

In this way Soviet tactics enforced, from about July 20th, a dispersal of the available German air forces over three main areas (Orel, Belgorod, and Stalingrad) and the undertaking of three distinct operations instead of the planned concentric attack on Kursk. Instead of a concentrated force of 1,000 or

more aircraft, therefore, the Germans were from that time operating with three small forces each comprising about 450 aircraft. 64

### Operational Conclusion

Operation Citadel was a resounding defeat for the German Army. In conducting this ill-advised offensive, Hitler lost irreplaceable manpower and equipment. Most importantly, he lost the opportunity to at least force a stalemate in the east. The cessation of Citadel, gave the Soviet High Command the opportunity to commence large scale offensives across the eastern front.

### Analysis of Operational Maneuver Characteristics

#### Mass

The concept for Citadel required massing of two large German forces independent of each other. At the start of the operation, these two

forces were approximately 80 miles apart. Ideally, these forces planned to link-up and concentrate their forces in an effort to encircle and destroy Soviet forces in the Kursk Salient. Unfortunately for the Germans, they lacked the ability to gain mass prior to the operation commencing. While I will discuss a large number of problems associated with this characteristic, there are two broad reasons why the German did not achieve mass.

1. Given the strength and preparation of the Soviet positions in the salient, the Germans had insufficient ground and air forces in the theater of operations to gain effective mass.

2. There was a failure on the part of Hitler, to identify the strategic objectives and to make the necessary resources available to insure success for the operational commanders.

The 36 total divisions available to Manstein and Model were insufficient on their own to complete the encirclement. Facing strong Soviet positions backed up by extensive reserves both German commanders committed available reserves early. The Germans did not try to offset Soviet strength with combat multipliers. They incorporated no deception



effort in the operation. Likewise, surprise was out of the question by July. The Kursk Salient was an obvious location for a German offensive.

The shortage of fighter aircraft affected the employment of other German aircraft which could not operate effectively without fighter protection. 65

Insufficient forces hastened Model's culminating point. After a penetration of 9-13 miles, he essentially reached the limit of his offensive capability. Field Marshal Kluge diverted promised reserves to overcome Soviet attacks against the northern Orel salient. The lack of any effective air support contributed to his problems. 66 No amount of bold action or risk-taking could overcome the situation; Model simply lacked sufficient force to accomplish the operational objective.

Manstein's force in the south fared better than Model's. He gained 25 miles in the first days of the operation. By the 3d day of the operation Manstein's main effort, Fourth Panzer Army, diverted units needed for the advance to protect its flanks. Committing his reserve (XXIV Panzer Corps) on 11 July, Manstein successfully encircled and destroyed a large

Soviet force. By this time, however, his attack was out of synchronization with Model's and there was little chance for completing the encirclement. Hitler's cessation of the operation on 13 July stalled any momentum gained by Manstein.

The strategic situation on the eastern front at the time Citadel commenced did not allow for using economy of force to gain mass against the Kursk Salient. By the summer of 1943, the Soviets regained strength lost during the winter and threatened German forces all along the eastern front. All indications are that the Soviets themselves were preparing for major offensives. Slow German replacement of tanks and men could not keep up with the growing strength of Soviet forces.

The Luftwaffe attempted to exercise economy of force. Rumanian and Hungarian air forces operated in adjacent theaters of operation. This allowed the Germans to concentrate over 50% of their Luftwaffe assets to the Kursk Salient. 67

While numerically inferior, the Germans had an opportunity to exploit the early unpreparedness of the Soviets. In April, following their

defeat during Manstein's counteroffensive in the Donets River basin, Soviet formations in the Kursk Salient were vulnerable. Weather problems, poor decisions to wait for new tanks, and unclear strategic and operational concepts postponed the operation until the Soviets had the opportunity to strengthen their positions. Had the German's accepted some risk in readiness to catch the Soviets unprepared they might have achieved the victory Hitler wanted. By waiting, however, risk turned to gamble as the Germans gave up any chance of striking at vulnerabilities and opted to attack at a time and location where the Soviets were strongest.

The extensive preparation of Soviet positions prevented the German forces from exercising mobility. Model described the offensive as a, "...rolling battle of attrition," when he ran into stiff Soviet defenses in depth. <sup>68</sup> Model lost the flexibility of moving forces around the battlefield in the business of overcoming extensive Soviet defenses. The loss of mobility prevented German commanders from distributing their forces in a manner to threaten the depth of Soviet positions.

Finally, the limited amount of German divisions available to Model and Manstein hastened the culminating point for the operation. In the north, Model culminated quickly when he was no longer able to get reinforcements to press his offensive. Indeed, he lost forces to threatened areas outside the theater of operations. With the loss of Model's momentum, the operational concept reached a culminating point because the encirclement was no longer possible.

Overall, the Germans did not achieve the operational mass they desired. The strength of Soviet positions, numerical inferiority, and failure to provide the necessary strategic resources were responsible for not achieving mass.

### Offensive Action

Citadel was clearly an offensive operation. While possibly misguided or misinterpreted at the strategic level, the Germans recognized the strength of offensive action. The problem in this case study, unlike the last, is that Hitler wanted decisive offensive victories without paying a

cost [e. g., giving up terrain to create favorable conditions]. Like Field Marshal Paulus and the Sixth Army at Stalingrad, the Germans paid the price for not modifying their strategic objectives.

As an offensive operation, Citadel failed to gain and maintain initiative. There are two reasons for this:

1. The extensively prepared Soviet positions prevented the Germans from maintaining offensive action.
2. At the strategic level, the Germans failed to make a commitment to provide necessary ground and air forces to ensure success.

Failure to attack in a location vulnerable to the Soviets limited German offensive action. The Soviet level of preparation by July 1943 made it difficult for operational commanders to set the terms for their tactical commanders to exploit. There is evidence of some success at the tactical level. On 13 July, III Panzer Corps (Army Detachment Kempf) and II SS Panzer Corps (Fourth Panzer Army) encircled and destroyed a large Soviet force. On an operational scale, however, the conditions did not exist to allow the two pincers [Model and Manstein] to link-up and encircle Soviet forces in the salient.

In the air, the Luftwaffe matched the Army's inability to gain the initiative. Air assets failed to gain air superiority long enough for the ground forces to penetrate the Soviet defense.

The inability of the Germans to contain enemy actions contributed to their own inability to attain freedom of action. There are two good examples of this in the case study. The first is the reinforcement of main defensive positions by the *Steppe Front* reserve forces. Because Manstein could not prevent this reinforcement, he ended up using his own reserves to fight through positions reinforced by *Steppe Front* reserves. The second example is the inability of the Germans on a strategic scale to hold Soviet offensives in place north of the Orel salient. Soviet offensives in this area caused diversion of Model's forces at a time when he needed them most. The result was the culmination of his offensive.

Finally, the limited penetrations of the German pincers failed to create any effects of leverage. The slow rate of advance through the extensive Soviet defenses prevented the Germans from achieving sufficient momentum to make the Soviet positions untenable.

### Other Considerations

Inability to gain mass and generate offensive action are not the only causes for the failure of Citadel. A factor that contributed decisively to this failure is the role played by Adolph Hitler as politician and strategist. Decisions made in this arena directly affected operational maneuver.

As the supreme commander Hitler directed both strategy and operations. The problem here is twofold; Hitler did not clearly identify strategic objectives; and he consistently disregarded the recommendations of his best operational commanders.

Hitler's strategic aims for the eastern front did not match strategic realities. At the completion of Manstein's winter offensive, Hitler had the opportunity to reach a draw in the east. The significance of the growing strength of the Soviet Army and their desires to adopt offensive strategy apparently slipped Hitler. The strength of the German Army lay in its mobility and superb leadership. Replacements of equipment and men were dwindling as a result of losses on the eastern front and in the

Mediterranean. Rather than adopt a strategic defensive and forestall Soviet offensives with counteroffensives, Hitler gambled on a questionable offensive and lost equipment and men that he would need later.

Most importantly, however, Hitler failed to identify clear and attainable strategic aims. Hitler's final reasons for launching Citadel (discussed during the case study) indicated that he was more concerned with sending a message (through a decisive offensive victory) to the Soviets and allies, than with attaining clear military objectives. It is logical to conclude that operational maneuver, the means to achieve strategic aims, was unachievable because the supreme command failed to identify strategic objectives.

Hitler failed to heed the advice of his operational commanders. He apparently did not recognize the futility of attacking into the strength of the Soviet defenses. Manstein proposed, on at least two occasions, that the Germans should try for a "backhand stroke."<sup>69</sup> This would require the Soviets to commence the offensive. The Germans would use their movement and mobility skills to shape the battlefield and create conditions that would



allow for a decisive strike against a Soviet operational center of gravity. More recommendations to abandon the offensive came from OKW, Guderian, and Albert Speer, his armament's minister. Convinced in his ability to "... achieve victory against impossible odds ...," Hitler ordered the offensive despite the best recommendations of his advisors. 70

### Case Study # 3

#### "Chromite"- The Inchon Landings, September 1950

##### Scope

This case study will investigate operations conducted by United Nations (UN) Forces, primarily from the United States (US) and Republic of Korea (ROK), against North Korean Forces on the Korean Peninsula. The North Korean invasion of the south in the summer of 1950 resulted in withdrawal operations by US and ROK forces to the Pusan perimeter. In order to regain the initiative, GEN Douglas MacArthur as Commander in Chief (CINC), Far East Command (FEC) conceived, planned, and executed this operation.

As an example of operational maneuver, Chromite is a success. Studying this operation will provide a number of insights into successful operational maneuver.

The time frame for this case study includes planning prior to the 15 September 1950 commencement and continues until the seizure of Seoul on 28 September 1950.

## Strategic and Operational Setting

The surprise attack by the North Korean Peoples Army (NKPA) on 25 June 1950 forced the withdrawal of ROK forces and UN sanctioned American forces to the Pusan perimeter. UN forces fought stubbornly to delay the advance of the NKPA to the vital port of Pusan. Pusan provided the necessary facilities for landing forces and supplies to push the NKPA north. US and ROK forces occupied the Pusan perimeter on 4 August 1950. <sup>71</sup>

As early as July, however, GEN MacArthur anticipated a landing at Inchon. <sup>72</sup> His staff and subordinate commanders were unrelenting in trying to convince him to conduct amphibious landings at locations other than Inchon. While openly recognizing the risks involved with an amphibious landing at Inchon, MacArthur set to work to convince subordinate commanders and the Joint Chiefs of Staff (JCS) in Washington that Inchon was the right location. He succeeded in gaining approval for his plans.

Looking at the strategic and operational goals provides insight into why MacArthur wanted Inchon. The strategic objective was to expel the

NKPA invaders and restore the territorial integrity of the ROK without invoking intervention by China or the Soviet Union. 73 In order to operationally accomplish the strategic goal, MacArthur would have to defeat the NKPA forces in the south. When considering these objectives, it is possible to understand why MacArthur insisted on an invasion at Inchon. GEN Matthew B. Ridgway recalled in his book, The Korean War:

... for only a landing at Inchon offered the opportunity for the climactic stroke needed if the enemy was to be destroyed before winter - a slashing of the enemy's main artery of supply and communication and an opportunity for a junction with the forces breaking out of the Pusan perimeter, to crush the enemy's forces in between. 74

Equally important is that Inchon offered the opportunity to liberate Seoul and restore the civilian government. To MacArthur these were "... important psychological, political and symbolic objectives ...." 75

MacArthur also felt that Inchon was an area where the NKPA least expected UN forces to strike. He stated:

The bulk of the Reds are committed around Walker's [Eight Army] defense perimeter. The enemy, I am convinced, has

failed to prepare Inchon properly for defense. The very arguments you [JCS officers] have made as to the impracticabilities involved will tend to ensure for me the element of surprise. For the enemy commander will reason that no one would be so brash as to make such an attempt. 76

For the North Koreans, the strategic objective was the unification of North and South Korea. This was the original invasion objective. At the end of June 1950, North Korea expected to overrun the south completely in a matter of weeks. 77 The stubborn delay by ROK and US forces postponed their plans. The NKPA operational objective at the time of the Inchon landing was the defeat of US and ROK forces in the south and seizure of the port of Pusan to prevent reinforcement.

The comparison of US/ROK and NKPA ground forces is relatively similar. Air and naval forces were clearly in favor of the US.

The US invasion force consisted of the X Corps (MG Edward M. Almond) organized with two divisions; the 1st Marine and the 7th Infantry (US Army). 8000 ROK soldiers rounded out the strength of the 7th Infantry Division. Two 155mm howitzer battalions, one air defense battalion, one

tank and tractor battalion, and an engineer group and brigade provided combat support to the X Corps. All totaled the strength of X Corps was 69,450 men. FEC General Headquarters (GHQ) had the 187th Airborne Regimental Combat Team for reinforcement. The X Corps had complete air and naval supremacy in the invasion area. 78

In the Pusan Perimeter, Eighth Army (LTG Walton H. Walker) consisted of 5 ROK divisions, 4 US divisions, a UK brigade, and other UN forces. 79

In the Inchon-Seoul area, North Korean forces consisted of 7300 - 8000 troops. Of these, approximately 1800- 2500 were in the immediate Inchon landing area. A small garrison of 400 North Korean Marines and artillery troops occupied Wolmi-Do Island guarding the entrance to the port. The remaining 5000 troops were in the city of Seoul. 80

US Intelligence regarded the North Korean capability to reinforce the Inchon landing areas as "inconsequential." The clear majority of NKPA troops were either in the line opposing the Pusan perimeter or located to their immediate rear. No known combat formations moving from the north

could divert to Inchon. North Korean air and naval forces were essentially obsolescent or nonexistent and could bring little to bear at Inchon. Three NKPA divisions from the perimeter could possibly reinforce the Inchon-Seoul area by using the main Seoul-Taejon-Taegu highway. 81

The obstacles present at Inchon demonstrate the unique planning considerations for MacArthur's staff.

The shore line there is a low-lying partially submerged coastal plain subject to very high tides. There are no beaches in the landing area - only wide mud flats at low tide and stone walls at high tide. 82

The tide presented severe problems. In order to get landing craft and tank landing ships (known as LSTs) ashore required 23 and 29 foot tides respectively. Tidal conditions to support these requirements occurred only one day a month and then for only 2-3 hours during the change of tides. 83 A missed opportunity in September would have detrimental effects on Eighth Army in the Pusan perimeter. Additionally, postponing the operation until the next favorable tides in October risked not finishing the war before the bitter winter weather started.

Another problem to overcome was the 16 foot sea walls that landing forces would have to scale. Troops would use ladders, grappling hooks, llnes, and cargo nets to overcome this obstacle. 84

A final obstacle presented to the planners was the small island of Wolmi-Do situated just outside Inchon harbor. This garrisoned island dominated the approaches to the Inchon landing sites and its seizure was necessary prior to the main force landing.

#### Operational Plans and Execution

MacArthur's FEC staff identified a number of tasks necessary for the success of Operation Chromite. These basic tasks fell heavily into the planning arena of Naval Forces Far East (NAVFE). In order to accomplish these tasks, the NAVFE Commander directed the formation of Joint Task Force - 7 (JTF-7) under the command of the Seventh Fleet commander, Admiral Struble. ADM Struble had seven subordinate task forces, including X



Corps as Task Force (TF) 92, under his command and control. JTF-7 tasks included the following:

1. Maintain a naval blockade of the western coast of Korea south of the 39th parallel.
2. Conduct necessary pre-D day activities.
3. Seize by amphibious assault, occupy, and defend the Inchon beachhead on D-day.
4. Transport, land, and support needed follow-on forces.
5. Provide necessary cover and support.

The JTF-7 objective area extended in an arc 30 miles inland from the landing sites. 85

The basic JTF-7 plan had three phases. The operation would commence on 15 September. The first phase consisted of a dawn amphibious assault by a Marine Battalion on the island of Wolmi-Do to eliminate resistance which could impact the main landings. The second phase of the operation was the seizure of the Inchon peninsula. Main forces from the 1st Marine Division would conduct a late afternoon amphibious

assault to seize the beachhead. Following this, they would expand operations to the north and east with a view to liberating Seoul. The 7th Infantry Division would land at D + 3 days to expand the beachhead to the south and east. The final phase consisted of liberating Seoul and gaining control of NKPA lines of communications. 86

In conjunction with the Inchon landings, Eighth Army (LTG Walker) would initiate operations to break out of the Pusan perimeter. LTG Walker's offensive would begin on 16 September. 87

In broad concept, LTG Walker's plan called for US and ROK forces to attack from present positions in the perimeter with a main attack toward the Taegu-Kumchon-Taejon-Suwon axis to destroy enemy forces and link-up with X Corps. 88

More specifically:

The plan called for the 5th Regimental Combat Team and the 1st Cavalry Division to seize a bridgehead over the Naktong River near Waegwan. The 24th Division would then cross the river and drive on Kumch'on-Taejon, followed by the 1st Cavalry Division which would patrol its rear and lines of communications. While this breakthrough attempt was in

progress, the 25th and 2d Infantry Divisions in the south on the army left flank and the ROK II and I Corps on the east and right flank were to attack and fix the enemy troops in their zones and to exploit any local breakthrough. The ROK 17th Regiment was to move to Pusan for water movement to Inch'on to join X Corps. 89

The relationship between Eighth Army and X Corps operations is obvious. Successful landings at Inchon would jeopardize NKPA positions in the south. The near simultaneous Eighth Army attack would prevent the shifting of NKPA forces to meet the Inchon threat. 90

A number of deceptive activities contributed to the overall plan. Positioning of naval fire support ships as well as amphibious feints on the east and west coast of the Korean peninsula contributed to reinforcing the NKPA belief that the attack would not come at Inchon. 91

Preliminary bombardment of the Inchon objective area commenced on 4 September by carrier based USMC aircraft. Starting on 13 September, naval ships closed on the landing sites and shelled enemy positions on Wolmi-Do and Inchon. 92

## The Ground Battle

The first landings occurred by the 3d Battalion, 5th Marines reinforced with tanks at 0633. (See figure 13) Supported by air strikes and naval gunfire, the Marines secured Wolmi-Do island by 0750. 93

With the Wolmi-Do garrison eliminated, the path was clear for the main force to land during the next high tide. Two regiments from the 1st Marine Division conducted the main landings at Inchon at 1733. Supported primarily by naval gunfire, the regiments accomplished their D-Day objectives, establishing a beachhead one mile inland, by 0130 on 16 September. Reports from NKPA prisoners captured at Inchon concluded that the Marines attained almost total surprise. 94

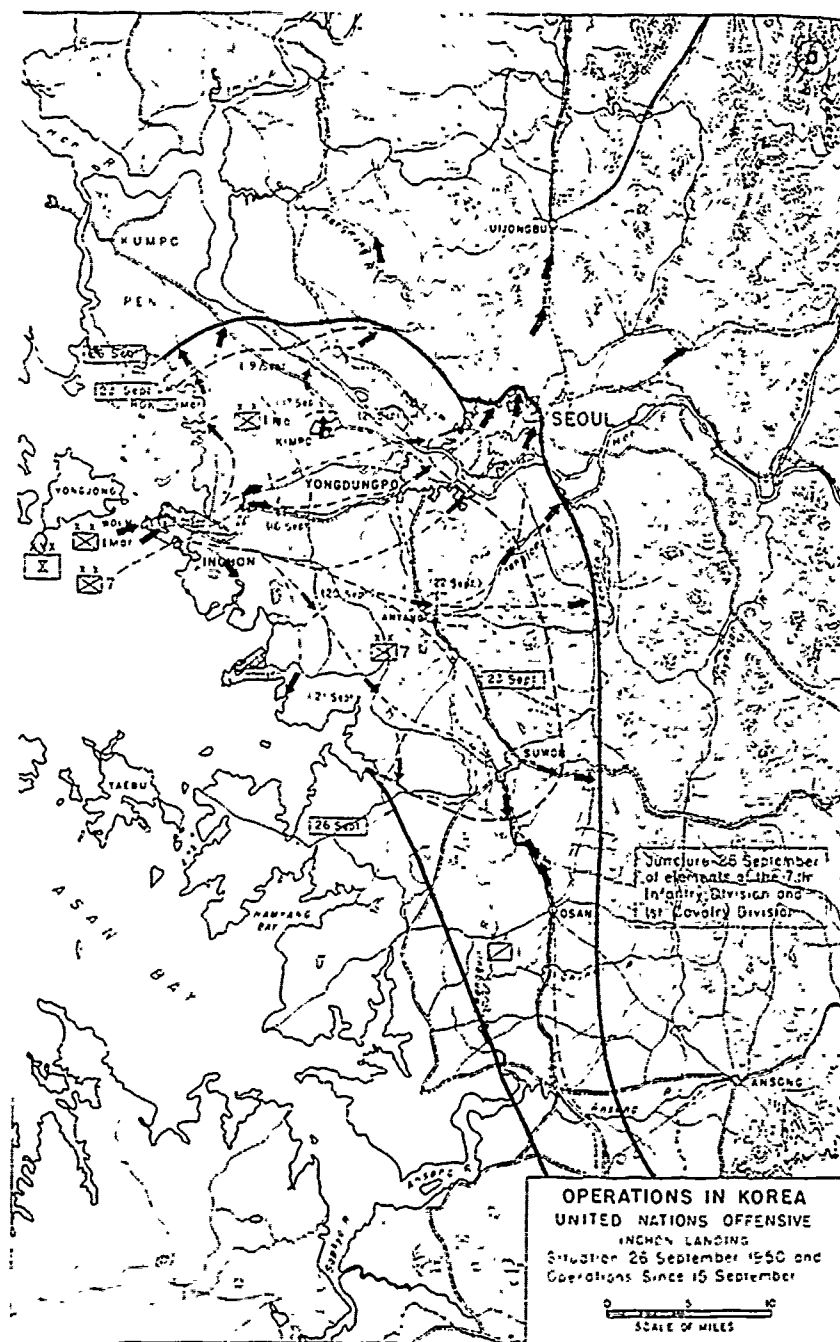


Figure 16, Incheon Landings 95

During the 16th, the 1st Marine Division continued to advance east and north and by that evening reached the beachhead line, six miles inland. <sup>96</sup> The advance continued on the 17th and 18th and Marine units gained control of Kimpo Airfield on the outskirts of Seoul. The seizure of the airfield increased X Corps ability to get air support and stockpile supplies. <sup>97</sup>

On the 19th, the 7th Infantry Division landed at Inchon and immediately fanned out to the east and south to protect the X Corps southern flank. <sup>98</sup>

Following the landing of the 7th Infantry Division, the 1st Marine Division commenced operations directed at capturing Seoul. MG Almond reinforced the effort for Seoul with ROK Marines and the ROK 17th Regiment. Despite bitter fighting that included a number of NKPA counterattacks, the 1st Marine Division captured Seoul on 28 September and control of the capital passed to the South Korean government. <sup>99</sup> The seizure of Seoul placed UN forces in positions allowing the destruction of NKPA forces along their lines of communication.

On the southern flank, the 7th Infantry Division continued to attack south capturing the Suwon airfield on 22 September. <sup>100</sup> The remainder of the division continued to attack eastward, south of the Han River to eliminate NKPA forces and prevent their interference with Marine forces in Seoul. The 31st Infantry Regiment, supported by air strikes and artillery, repulsed a counterattack by elements of the NKPA 105th Armored Division south of Suwon. With this success, the road was open to Osan. <sup>101</sup>

By the 19th of September, the landings at Inchon were having an effect on NKPA positions around the Pusan perimeter. NKPA withdrawals commenced on that date and units on all fronts of the perimeter were in full movement by the 23d. <sup>102</sup> (See figure 17)

The Eighth Army began a break-out with a main attack along the Taegu-Kumchon-Taejon-Suwon axis to link-up with X Corps. <sup>103</sup> Elements of the 1st Cavalry Division made contact with elements of 7th Infantry Division north of Osan on the early morning of 27 September. <sup>104</sup>

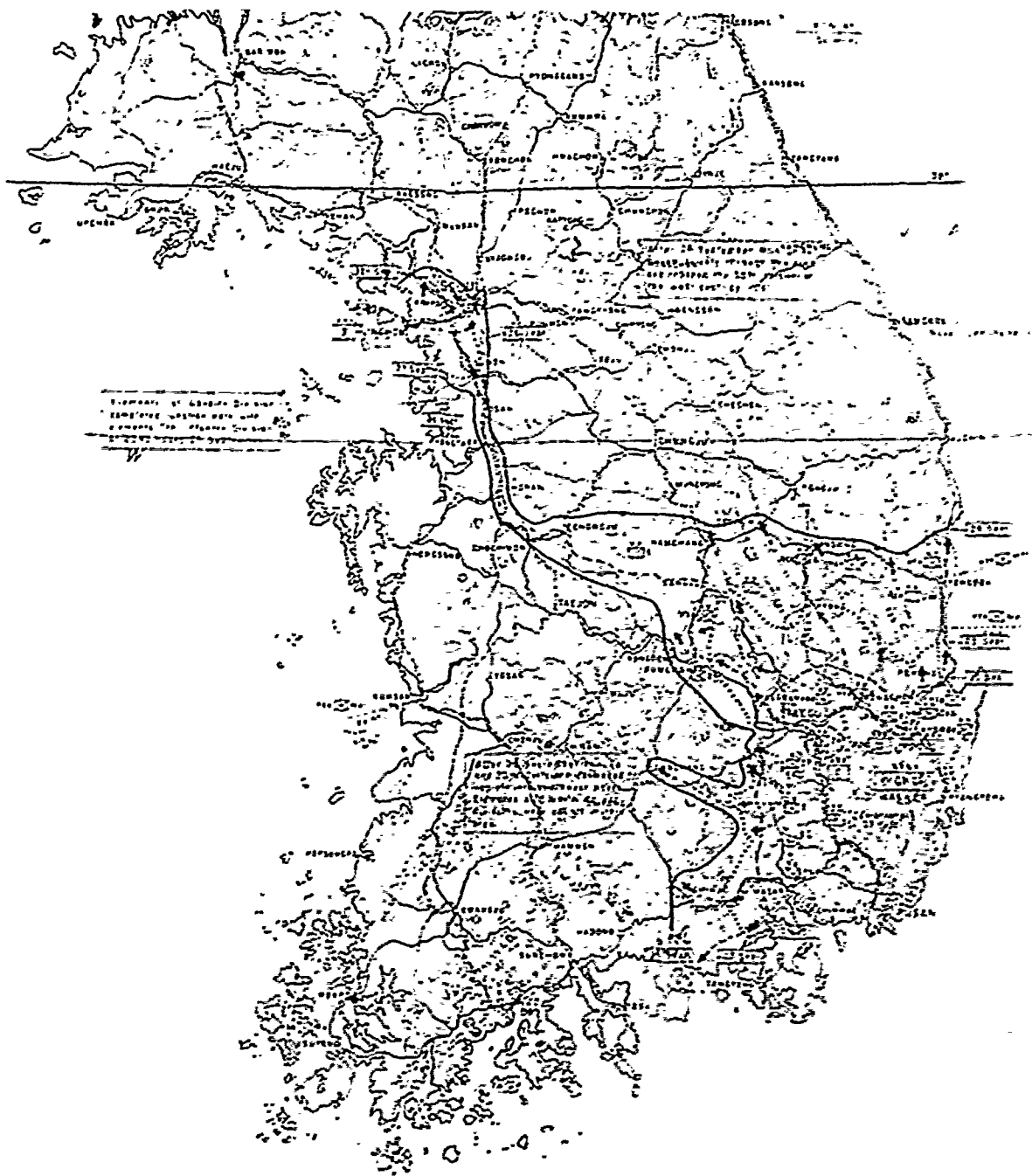


Figure 17, Eighth Army Offensive 105



## The Air and Naval Battle

Both air and naval assets contributed to the development of operational maneuver at Inchon.

Naval support of the operation consisted primarily of gunfire and rocket strikes prior to D-Day. These fires had the purpose of suppressing and disrupting NKPA forces in the landing area. Bombardment of the area by gun and rockets commenced on D-2. 106

Joint staffs accomplished detailed fire planning for naval assets well in advance of the landing. Staff officers organized the landing area into 52 target areas to control and distribute fires. 107

D-day support consisted of close support naval gunfire on known or suspected NKPA positions. On the evening of D-Day, the JTF used cruisers to fire interdiction missions to disrupt North Korean reinforcements. 108

In one instance of naval support on D-Day, naval ships fired 6000 rockets in 20 minutes at concentrated targets in the landing area to support forward movement of ground forces. 109

Air operations prior to D-day consisted of strikes on Wolmi-Do and Inchon to expose and destroy enemy positions. Air operations against the landing area commenced in earnest on 10 September and continued until D-day, often working in conjunction with naval gunfire. 110

On D-Day, in addition to providing close support, air assets flew deep missions to interdict any enemy movement within a 25 mile arc of Inchon. 111

#### Operational Conclusion

The combined X Corps landing and Eighth Army offensive completely overwhelmed the NKPA forces. Combat reports indicate that only 25,000 to 30,000 disorganized NKPA troops made it back to North Korea from the Pusan perimeter. 112 With this destruction to the NKPA, the territorial integrity of the ROK was again intact.

## Analysis of Operational Maneuver

### Mass

The Inchon landing is a good example of how commanders apply mass to create decisive results. MacArthur's ability to husband the necessary resources and then bring their combat power to bear at an unexpected location is clearly applicable for modern operations.

In anticipating an eventual landing at Inchon, MacArthur took early steps to develop the forces that would be necessary for the landing. In doing this he exercised economy of force and bold risk-taking. By any account, there was clearly a crisis in the Pusan perimeter in August 1950. NKPA forces were continually probing and launching attacks to penetrate the perimeter. On 1 September, NKPA forces launched a large-scale offensive to seize crossings on the Naktong River. <sup>113</sup> MacArthur's decision to divert forces from Eighth Army, in this chaotic situation, represents a

very bold risk. While the payoff was the successful landing at Inchon, the potential loss at Pusan was substantial.

By stabilizing the Pusan Perimeter early, MacArthur was able to divert combat forces earmarked for Eighth Army to Japan to form the nucleus of his invasion force. While he eventually had to reinforce Eighth Army's perimeter with some forces, he held the clear majority as landing forces. Walker's Eighth Army economized forces over an estimated front of 120 miles. As the situation in the Pusan Perimeter grew increasingly dangerous in August 1950, MacArthur continued to divert troops to the X Corps in Japan. As stated in the official army history:

From 23 August to 3 September the Far East Command allotted to the 7th Infantry Division the entire infantry replacements stream reaching FEC, and from 23 August through 8 September the entire artillery replacement stream. By 4 September the division had received 390 officers and 5,400 enlisted replacements. General MacArthur obtained service units for the X Corps in the same way - by diverting them from scheduled assignments for Eighth Army. The Far East Command justified this on the ground that, while Eighth Army needed them badly, X Corps' need was imperative. 114

In addition to the diversions discussed above, MacArthur directed that ROK troops be sent from Korea to Japan to round out the 7th Infantry Division. In another highly controversial action, MacArthur ordered the 1st Provisional Marine Brigade (formed around the 5th Marine Regiment) detached from the Eighth Army on 3 September and moved to Pusan for boat movement to Inchon. This brigade had played a major role in maintaining the Pusan perimeter. Its loss caused General Walker to remark, "If I lose the 5th Marine Regiment I will not be responsible for the safety of the front." 115

To offset the risk accepted at diverting troops away from Pusan MacArthur established a regimental floating reserve off Pusan. In addition, MacArthur promised Walker to assign the first regiments arriving with the 3d Infantry Division to Eighth Army. 116

Another aspect to MacArthur's risk-taking is his selection of Inchon as the invasion site. As mentioned earlier in the case study, a number of MacArthur's staff as well as members of the JCS were skeptical on this location. The extreme tidal conditions and poor landing beaches

limited access to Inchon. Several other suitable locations existed on both the east and west coasts of the peninsula. A more suitable location at Kunsan, lacked in MacArthur's mind, the operational depth to effectively cut the NKPA supply lines. <sup>117</sup> Most importantly, a landing at Inchon provided operational surprise. <sup>118</sup> To those who opposed Inchon:

MacArthur stressed the strategical, political, and psychological reasons for the landing at Inch'on and the quick capture of Seoul, the capital of South Korea. He said it would hold the imagination of Asia and win support for the United Nations. Inchon, ... would be the anvil on which the hammer of Walker's Eighth Army from the south would crush the North Koreans. <sup>119</sup>

In applying the mass of his forces, MacArthur clearly focused on the NKPA center of gravity. Their center of gravity was the force located around the Pusan perimeter. By concentrating forces in the south, the NKPA had essentially neglected operations in the rear. No major reserve forces were available in the north. Finally, the NKPA was relying on supply routes that traversed Seoul. <sup>120</sup> As a result of this situation, the NKPA center of gravity was extremely vulnerable to attacks against its rear. The supply

routes and lines of communication became the decisive points for MacArthur's attack.

Focusing on the NKPA center of gravity required MacArthur to maintain a distribution of forces adequate to accomplishing the tasks of landing at Inchon and defeating the NKPA itself. In this particular case, instead of distributing forces along interior lines through Pusan and eventually conducting a break-out or penetration, MacArthur choose to use exterior lines to distribute his invasion forces at Inchon allowing interior lines to be used in capturing Seoul and cutting NKPA lines of communication and applying pressure on the main NKPA forces (by Eighth Army). It is apparent that the NKPA did not anticipate the Inchon landings and in fact did not feel its effect for several days. The eventual distribution of UN forces between the Inchon-Seoul area and the Pusan perimeter caused the NKPA to be "turned-out" of their positions. 121

The distribution of forces between Pusan and Inchon also illustrates the importance of massing throughout the depth of the battlefield. While the mass of the Eighth Army commanded the NKPA

attention in the Pusan area; the mass of the X Corps at Inchon concentrated on smaller forces and lines of communication against which the main NKPA forces had little influence. Preliminary bombardments by air and naval assets in early September helped to isolate the landing area and neutralize enemy positions on Wolmi-Do and Inchon. 122

MacArthur's naval component provided the necessary movement and mobility for forces to get into the right locations. The flexible movement capability of naval vessels allowed MacArthur to include deceptive measures as part of his operation. Naval mobility also accounted for the availability of air and surface fire support assets in the landing area. The mobility afforded by the naval element afforded the ability to shift forces between bases in Japan, Inchon, and Pusan. This ability was vital in husbanding resources for the landing.

With nearly 70,000 men, as well as air and naval supremacy, the X Corps possessed an approximate 10:1 combat ratio over the NKPA at Inchon. This ratio allowed the UN forces to expand the Inchon beachhead quickly and accomplish operational objectives in 13 days. MacArthur's insistence on



overwhelming forces prevented a premature culmination in the landing area. As operations subsequent to the landing illustrate the overwhelming size and capability of the X Corps allowed operations to continue well into October when UN forces reached the Manchurian frontier.

The importance of mass in this operation goes beyond the advantage of superior numbers. Use of economy in the Pusan perimeter, bold risk-taking in selecting Inchon, distribution of forces against the operational center of gravity, and fighting through the depth of enemy dispositions allowed MacArthur to achieve decisiveness.

### Offensive Action

Most striking in this case study is MacArthur's rapid transition to an offensive via the Inchon landing. Through use of offensive action, MacArthur accomplished two critical events. First, he completely unhinged the NKPA grip on the Pusan perimeter. Once they realized the magnitude of the invasion at Inchon, NKPA forces had no choice but to react. Second, the Inchon landing created conditions for tactical exploitation. The

overwhelming mass of UN forces at Inchon allowed the X Corps to capture Seoul quickly and eventually establish positions along the Manchurian frontier.

There are conflicting accounts of when MacArthur conceived the Inchon plan. Some, such as Robert Heintz, suggest its conception in early July. Others, such as Roy Appleman, suggest its final form came together in early August. Regardless of origin, the important point is that MacArthur anticipated the need for offensive action very early. The formation of the Pusan perimeter along the defensible terrain of the Naktong River was in fact an attempt by MacArthur to contain the NKPA invasion so that a counterstroke could take place. His decisions to withhold forces earmarked for the Eighth Army and instead assign them to the newly formed X Corps, attests to MacArthur's anticipation. MacArthur's anticipation was backed-up by resolute confidence in the success of the operation. MacArthur's operational prescience and strength of will were decisive in themselves.

Flexibility within this operation is interesting to consider. MacArthur accepted extreme risk in gathering the resources needed for the landing. He accomplished his accumulation of resources to the detriment of

the Eighth Army in the Pusan perimeter. General Walker expressed concern at his ability to maintain the perimeter, much less assume the offensive. Through reinforcements to Eighth Army in early September and the effect of the landing at Inchon, MacArthur created flexibility for Walker. The subsequent withdrawal of NKPA forces from the south opened significant opportunities for tactical offensive operations.

The overall concept of landing behind the main enemy force allowed significant flexibility in operational and tactical options. By choosing Inchon, MacArthur kept open options at other locations like Kunsan on the west coast or Chumunjin-up on the east coast. <sup>123</sup> In ultimately arriving at the Inchon decision, the FEC developed plans for landings at several other locations in the event that the enemy situation changed or the landing failed. <sup>124</sup>

The Inchon landing was a catalyst for tactical exploitation from the Pusan perimeter and in the Seoul-Inchon area. The landings at Inchon and the seizure of Seoul created the friendly dispositions that ultimately allowed the tactical UN forces to pursue the NKPA to the Manchurian border.

Once the NKPA forces on the Pusan perimeter felt the effect of Inchon, conditions that allowed for the tactical break-out of Eighth Army were available.

The Inchon landing essentially limited NKPA options to a withdrawal. By quickly severing lines of communication through Seoul, the NKPA lost the initiative and reacted to the maneuver advantage created by UN forces in that area. The nearly simultaneous break-out by Eighth Army kept pressure on the withdrawing NKPA forces and limited their ability to conduct any operations to counter the landing.

The extensive use of air and naval assets also constrained NKPA freedom of action. The early bombardment of positions and lines of communication helped to isolate the landing area. Naval presence along both coasts provided important fire support as well as means to further threaten the NKPA with landings at multiple locations.

Perhaps most obvious of all, the Inchon landings demonstrated Simpkin's concept of leverage. By landing major forces in depth and then rapidly cutting lines of communication, MacArthur essentially forced the NKPA center of gravity to be turned-out of position. As the X Corps

continued to move inland, the disposition of NKPA forces in the south continued to become more precarious.

Unlike leverage in the previous case studies, the relationship between the fixing force (Eighth Army) and the mobile force (X Corps) in this case was not direct (as depicted in Simpkin's model). Instead, the hinge between these two forces, at least until they linked-up on 27 September, were Sea Lines of Communication (SLOC) between Pusan and Inchon. The SLOC provided the means for positioning forces quickly in the enemy's depth. Because of the lack of North Korean air and naval threat, UN forces maintained lines of supply by SLOC until overland routes were feasible.

The offensive-mindedness of the Inchon landings, in conjunction with overwhelming mass, carried the operation. Anticipation, bold risk-taking, and operations in depth contributed significantly to this victory.

## Case Study # 4

### "Gazelle"- The Israeli Encirclement of the Egyptian Third Army.

October 1973

#### Scope

This case study investigates operations conducted by the Israeli Defense Force (IDF) against the Egyptian Army between 15 October and 24 October 1973. Following the combined Syrian and Egyptian invasions of Israel on 6 October, the IDF successfully pushed back the Syrian incursion in the Golan Heights and then shifted forces to repulse the Egyptian attack. The combined Arab attacks seriously caught the IDF by surprise and as a result pre-empted the Israeli mobilization process for several days.

As an example of operational maneuver, Gazelle is an overall success. Its level of success is not, however, as great as discussed in the previous case study. Being caught by surprise as well as using an organizational structure organized primarily around tanks and airplanes prevented a more complete and swift operation. The importance of Gazelle

is that until the recent allied victory in Iraq and Kuwait this operation was the primary contemporary example of modern operational warfare.

This case study primarily discusses the crossing of the Suez Canal by IDF forces and their subsequent encirclement movement to Suez City.

### Strategic and Operational Setting

At 1400 hours on 6 October 1973, Syrian and Egyptian forces commenced a coordinated attack on Israel. In the north, the Syrian attack occurred in three echelons. By 8 October, the IDF was counterattacking and on the 11th of October seized a substantial portion of Syrian territory and held it until the UN imposed cease-fire on 24 October. With the Golan front essentially stabilized on 13 October, the IDF was able to begin shifting forces and turning its primary attention to the Egyptian incursion in the Sinai.

The inability of the 1967 UN cease fire negotiation to result in a "... just and lasting peace," created military and political conditions that allowed a war of attrition to take place between the IDF and surrounding

Arab countries. 125 Failure to resolve these problems made a war inevitable. The situation encouraged the Arab nations, most notably Egypt and Syria, to begin planning an operation to resolve the diplomatic deadlock. 126

In the Sinai, the Egyptian strategic objective was to gain "political concessions." Egypt was interested in using world opinion for:

... challenging and, if possible, destroying three of Israel's underlying foreign policy pillars - the invincibility of the Israeli military forces, secure borders based on geography, and peace forced on Israel's own terms. Thus Egypt started a military war for political objectives. 127

Egyptian operational objectives were to defeat the IDF forces in the western Sinai and, as a result, end the war of attrition. 128 (See figure 18)

The Egyptian crossing resulted in the establishment of a bridgehead that "... was shallow, incomplete, [and] thinly held in many places ...." 129 The Egyptians had ample opportunity to exploit their initial successes. For example, on the 8th of October, having ambushed a IDF counterattack, the



Egyptians failed to press their attack to accomplish tactical objectives despite the fact that few IDF tanks were in the way of their advance. 130 It appears however, that the Egyptians planned their operations with a limited operational and strategic objective based primarily on remaining within the missile umbrella provided by their air defense assets. As Chaim Herzog concluded in, The War of Atonement, the Egyptians:

... planned their offensives in such a manner as to ensure that the Israeli forces in the line would be inadequate to smash their attack before the deployment of international political forces. 131

In essence the Egyptians planned on holding a bridgehead with enough strength to ward off IDF attacks until the world community (via the UN) forced a negotiated settlement.

Thus on the eve of Operation Gazelle, the Egyptian Army established a bridgehead reinforced by tanks which was generally contiguous from Port Said to Suez City. An exception to this continuous bridgehead was the area just north of the Great Bitter Lake.

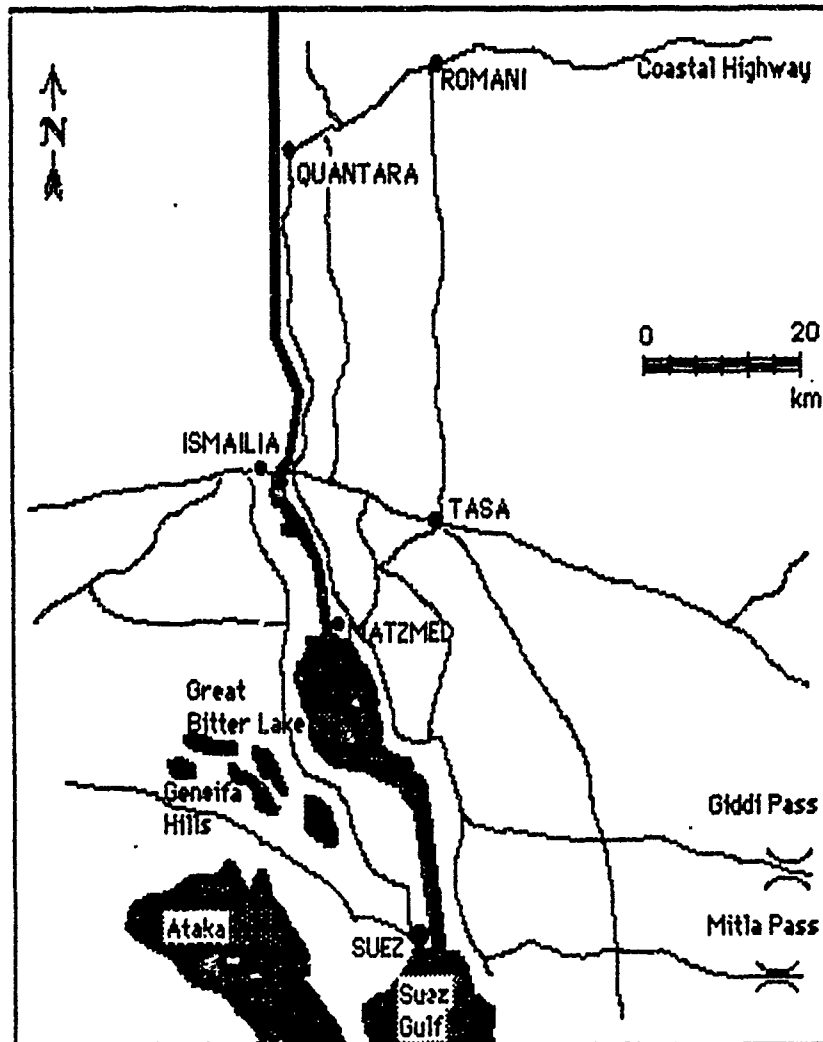


Figure 18, Sinai Orientation Map 132

In the specific crossing area, the Egyptians had the 16th Infantry Division guarding the Akavish Road and the Chinese Farm. To their north was the 21st Armored Division guarding the Tirtur Road and the Missouri stronghold. 133

At this stage of the war the Israeli strategic objective was to gain control over at least portions of the Suez Canal. In so doing they hoped to have a "political bargaining card" for the inevitable cease-fire negotiations. 134

In his book, On the Banks of the Suez, MG Avraham Adan, describes the operational objective of IDF forces.

Southern Command's objective was to take control over the area between the canal carrying sweet water from the Nile toward Ismailia and Mount Ubaid, Mount Ataka, and Suez City. This was an area some 100 km long and 30 km wide in its northern zone and 50 km wide in its southern part. The aim was to destroy forces on the west bank within this designated area and to encircle the Third Army and annihilate it from the rear. 135

MG Adan also provides insight on the strength of Egyptian forces in the area of operations.

In the Third Army sector on the east bank were the 7th and 19th Infantry divisions, the 130th Amphibious Brigade, and the 3rd, 22nd, and 25th Tank Brigades; while on the west bank were the 4th Armored Division (minus the 3rd Tank Brigade) and the 113th Mechanized Brigade from the 6th Mechanized Division.

In the Second Army area to the north, three Infantry Divisions, a Tank Division and two separate Tank Brigades were east of the canal. On the west bank, the Egyptians deployed two mechanized brigades. All totaled the Egyptians had approximately 650 tanks. In GHQ reserves, the Egyptians had seven airborne or commando brigades, five tank brigades, and two tank battalions. 136

The IDF had four divisions available with a total of 700 tanks. Two airborne brigades were in the immediate area and would be available to support operations. One of these Parachute brigades was attached to MG Ariel Sharon's division. 137 The other Parachute brigade alternated between Adan's and Sharon's divisions. 138

At the start of the war, Arab fighter aircraft outnumbered IAF aircraft by a ratio of 2:1. 139 Of significance, however, was the high training level of IAF pilots. This level of competence accounted for heavy

losses to the Arab air forces. The extensive air defense assets of the Arab armies accounted for the majority of IAF aircraft losses. <sup>140</sup> Both Egyptian and Syrian air assets were unable to strike IDF targets in depth. In comparing the opposing air forces, the Arabs were able to fly only 1250 sorties during eighteen days of combat. The IAF generated 500 to 800 sorties daily. <sup>141</sup>

On 6 October 1973, the Egyptians outnumbered the IDF in artillery pieces by a ratio of 10:1. <sup>142</sup>

### Operational Plans and Execution

The Israeli plan for the crossing and encirclement called for two phases. (See figure 19)

Phase I consisted of Sharon's division clearing and opening roads to the crossing site at Matzmed; securing a small bridgehead on the west bank, establish three bridges across the canal; and, assist the passage of follow-on divisions. <sup>143</sup> In conjunction with this phase a diversionary attack

would occur along the Tasa-Ismailia Road to draw the attention of the Egyptian 21st Armored Division away from the crossing site. 144

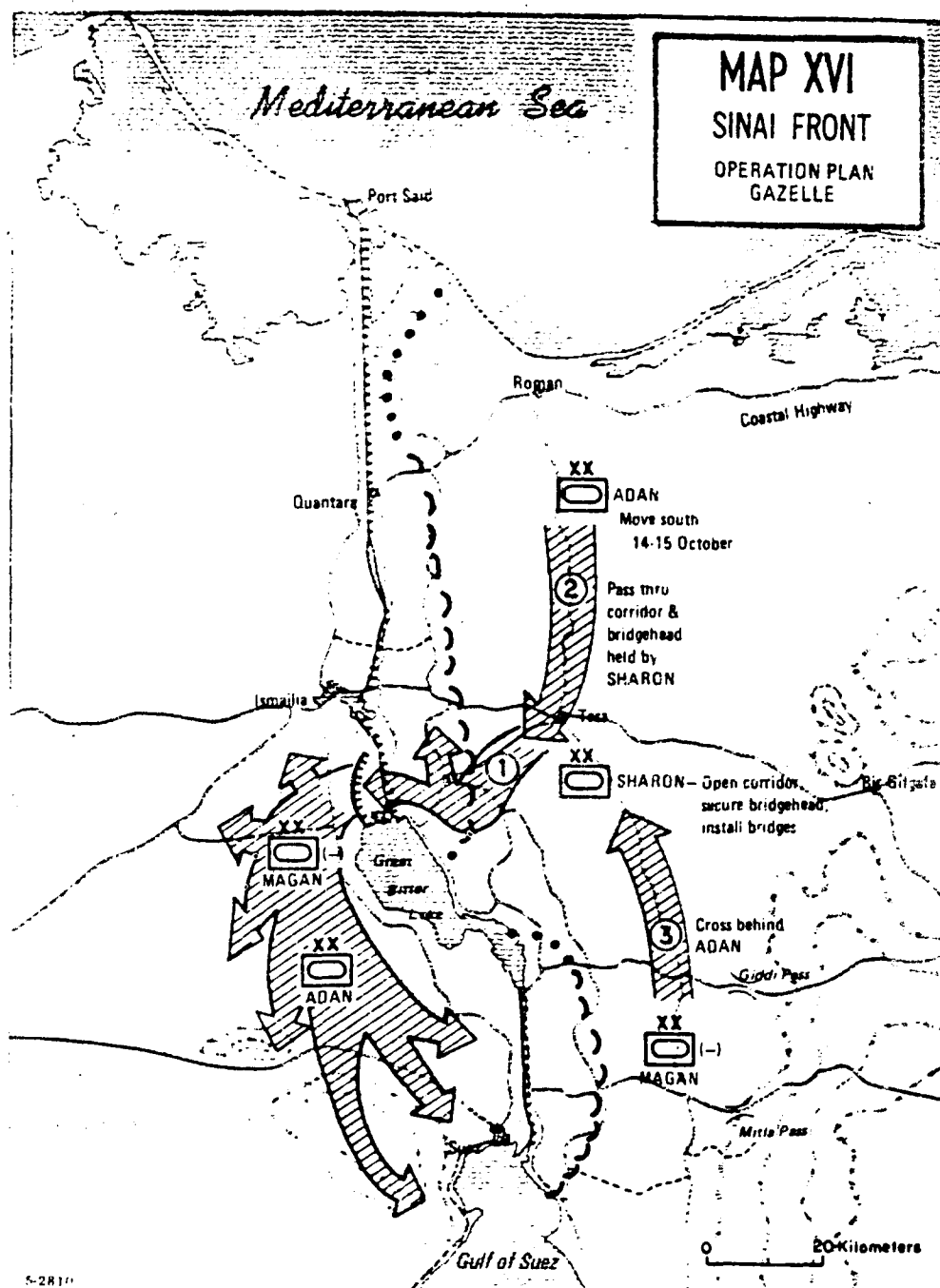


Figure 19, Israeli Crossing Plan for Operation Gazelle 145

Phase II consisted of Adan's Division crossing through Sharon and attacking south to seize the Geneifa Hills and Mount Ataka. Adan prepared to capture Suez City. Units commanded by MG Kalman Magen and BG Sasson Yzhaki would defend on the east bank, then replace Sharon at his bridgehead to allow him to attack southward. 146

Israeli planners estimated that establishing the crossing site would require about 12 hours and that the entire operation, to include the capture of Suez City, could be complete within 48 hours. 147

### The Ground Battle

The operation commenced at 1700 hours on 15 October with a diversionary attack by one of Sharon's brigades. Approximately, one hour later, a second brigade of Sharon's division (Reshef Brigade) attacked south and then west toward Great Bitter Lake. The brigade was attempting to exploit a gap identified earlier between the Second and Third Egyptian Armies. One battalion of this brigade swung west on the Tasa-Great Bitter

Lake Road and secured the crossing sites. As the remainder of the brigade continued north to secure blocking positions against the Egyptian 21st Armored Division, it became involved in a protracted tank battle. In fighting to overcome Egyptian resistance, an Israeli battalion linked up with Sharon's Parachute Brigade and led them, with their rubber assault boats and some ferries, down to the crossing sites. None of the large bridges were able to get through. 148

By 0300, the parachute brigade established a 600 meter bridgehead on the west side of the canal. Ferrying operations started later in the morning and by noon 27 tanks were on the west bank. 149

The Egyptian response to these developments was slow. Apparently, they did not understand the magnitude of the Israeli crossing attempt. Egyptian resistance on the east bank remained high. They clearly had the advantage of firepower and well-prepared positions. Eventually, the Israeli's had to commit another parachute brigade to Adan's division to help in opening the roads that were controlled by Egyptian infantry. 150



Adan's division fought to the Chinese farm. After repulsing several fierce Egyptian counterattacks, Adan's forces opened the main road to the crossing sites and the heavy bridging equipment was able to reach the canal. Adan began crossing his division at 1945 hours on 17 October. 151

The IAF did its part in the crossing. With the Golan Heights secure the majority of IAF assets shifted to the Sinai where they conducted operations, in conjunction with some ground units, to degrade the Egyptian air defense system. The IAF essentially maintained air superiority over its ground forces during the entire operation. 152

On the 18th, Southern Command changed the plan and directed Sharon to attack north toward Ismailia while Magen followed Adan and attacked on his western flank. (See figure 20) As Adan approached the vegetated Sweet Water Canal area, he took heavy losses at the hands of Egyptian infantry. 153

The Egyptians responded to these developments by deploying reserve forces to block approaches to Cairo. Unaware of IDF intentions to encircle Third Army, the Egyptians were not able to react in a coordinated

fashion to prevent the Israeli attack toward Suez City. One mechanized brigade attempted to stop Adan and Sharon as they broke out from the bridgehead. It failed. 154

Adan and Magen reached the outskirts of Suez City on the evening of 22 October. Here they halted in compliance with an impending UN cease-fire agreement. Sharon's forces, however, continued to fight on the outskirts of Ismailia. They continued to have difficulty pushing Egyptian forces away from the crossing sites on the west bank. 155

On the 23d, Adan and Magen continued their attacks to encircle the Egyptian Third Army. In the process of doing this, Adan stopped no less than seven attempts by the Third Army to extricate itself to the east bank. Adan and Magen continued to sweep further to the west and the Third Army with 20, 000 soldiers, 300 tanks, and supplies was essentially encircled. 156

On the 24th, strong Egyptian forces repulsed IDF forces as they entered Suez City. The IDF forces withdrew under cover of darkness and never captured Suez City. This effectively ended the operation. 157

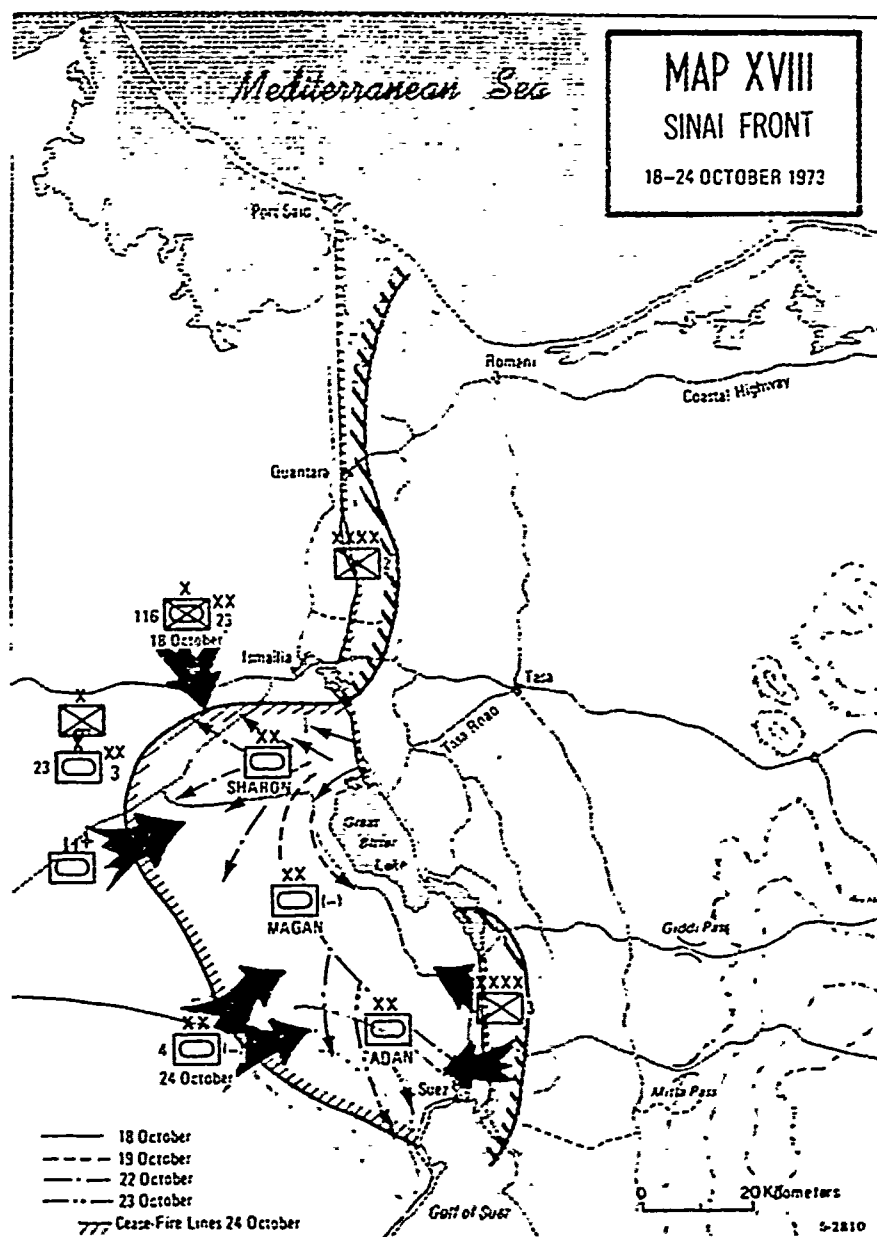


Figure 20, Encirclement of Third Army 158

## The Air Battle

The strength of the Egyptian air defense systems forced the IAF to operate in a manner not previously anticipated. The primary effort of IAF sorties was to close air support of advancing IDF ground forces. This priority accounts for the high loss rate of IAF aircraft to missile and anti-aircraft fire. 159

The failure of the Egyptian Air Force to challenge air superiority of the IAF eventually allowed the Israelis to concentrate their effort on destroying Egyptian air defense systems. Destruction of missile systems by advancing ground forces also contributed to the development of IAF air superiority. By 21 October, the entire theater of operations was virtually free of Egyptian missile batteries. 160

IAF air superiority also accounted for two additional advantages. It prevented the conduct of Egyptian heliborne operations into the Israeli rear area. It also prevented other Arab nations, such as Jordan, from entering the war for fear of losing their air forces. 161

## Operational Conclusion

While failing to capture Suez City, the IDF did accomplish its primary task of encircling the Third Army. In so doing, they accomplished their strategic objective of gaining control over at least a portion of the canal to use as a bargaining chip in the upcoming cease-fire negotiations. The IDF also accomplished the task of destroying a large amount of Egypt's war-waging capability. They destroyed hundreds of tanks, aircraft, and air defense systems. For their part in holding on to portions of the western bank, the Egyptians, while defeated militarily, ensured a favorable diplomatic position in the upcoming negotiations. 162

## Analysis of Operational Maneuver

### Mass

The Sinai Campaign is a widely studied and examined battle. Its lessons and implications for future battle are far reaching. The campaign was a major catalyst for change within the US Army in the 1970s. With respect to mass, this campaign provides data that demonstrates the advantages associated with mass as well as the problems which ensue from its ineffective application.

In the broadest and simplest meaning, mass requires concentration. The Israeli's achieved their operational objectives by concentrating greater quantity, and quality, of tanks and airplanes in crossing the Suez Canal and encircling Third Army.

In, The Crossing of the Suez, LTG Saad El Shazly, the Egyptian Armed Forces Chief of Staff during the 1973 war, discusses the growing numerical concentration of the IDF. On the eve of Sharon's crossing, the Egyptians held roughly a 3:1 ratio in ground troops. LTG El Shazly

considered this an adequate ratio to repel an IDF assault. However, as a result of secondary actions against Egyptian forces on the west bank, the IDF was able to generate a ratio of 2:1 in armored forces at the crossing site by October 17. By the 18th, when the IDF fully established their bridgehead, the ratio in armored forces was 5:1 in their favor. With IDF exploitation to Suez City, the ratio continued to favor them by a ratio of 3:1 over Egyptian forces. 163

This concentration of armored forces in the decisive area was accomplished at the risk of maintaining ratios of approximately 4:1 in favor of Egyptian forces elsewhere on the west bank. 164

While it is apparent that the Egyptians greatly assisted the IDF by slow reactions, the IDF also took great risks in throwing all their weight at a crossing north of Great Bitter Lake. Had the Egyptians been able to determine the IDF intent or been able to mass their air and infantry forces faster, the outcome could would be different.

The IDF was not without problems in concentrating. The decision to attack north toward Ismailia with Sharon's forces (and elements of follow-

on divisions) took potential combat power away from the main thrust moving south. Not dissipating the effort between north and south might have allowed the IDF to accomplish their objectives more quickly. 165 With a Superpower imposed cease-fire imminent and significant political pressure to seize final lines that would favor negotiations; a mistake may have occurred at the operational level in splitting major forces away from the main effort.

Air assets played a significant role in concentration for the IDF. The IAF struck early to destroy Egyptian air defense sites and reduce vulnerability to aircraft. Air assets struck at forces on both sides of the canal to prevent their successful interdiction of IDF forces. 166

With the Egyptian air defense umbrella reduced, the IAF was able to gain and maintain air superiority throughout the operation. In addition they were able to maintain a consistently high sortie rate throughout the operation (500-800 sorties daily).

The quality of the IAF pilots contributed significantly to generating mass. In air to air combat, the IAF lost only one aircraft for every fifty



Egyptian aircraft. 167 Lack of aggressive Egyptian air strikes against the depth of Israeli positions freed up IAF aircraft and pilots to strike Egyptian targets. Egyptian over-reliance on ground and missile air defense systems contributed to their defeat.

The mass of the IDF concentrated against the Egyptian center of gravity. At the time of the Israeli crossing, the Egyptian center of gravity consisted of its forces located on the west bank under the cover of their air defense umbrella. By eliminating the umbrella, fixing the northern half of Egyptian forces, and then encircling the southern half the IDF effectively reduced the cohesion of Egyptian forces.

Movement and mobility were a serious problem for the IDF, especially in getting to the bridgehead. The large density of forces combined with limited access routes to the crossing sites delayed IDF operations significantly. Because of heavy congestion and tenacious Egyptian defense, heavy bridging was not able to reach the crossing sites until 48 hours into the operation.

The organizational structure of IDF units also contributed to mobility difficulties. A shortage of mechanized infantry slowed the operation at critical junctures and prevented the IDF from fighting with the best forces needed for each situation. The case study provides several examples of this. First, well-positioned Egyptian forces prevented rapid movement by large IDF units along the Akavish Road to the crossing sites. Second, the inability of an attached parachute brigade (as well as the heavy bridging assets) to get forward quickly delayed the initial crossing of the Suez Canal by Sharon's forces for approximately six hours. Third, Egyptian infantry again disrupted Adan's advance through the heavily vegetated Sweet Water Canal at high costs to the Israeli forces. Fourth, well-emplaced Egyptian units prevented a largely tank-heavy IDF unit from capturing Suez City.

Israeli concentration occurred throughout the depth of the battlefield. The myriad of Israeli operations consisted of deep air strikes, probing ground raids to destroy Egyptian radar and air defense sites, diversionary and holding attacks on the flanks, and deep maneuver behind the concentration of Egyptian forces.

There are several areas where the IDF nearly reached culminating points. These included shortages of mechanized infantry forces, uncoordinated resupply sources, and replacement manpower after the operation.

A major impact on Israeli culmination was in their shortage of mechanized infantry. Not having these forces seriously detracted from their overall success. The flexible response provided by the parachute brigades helped to overcome this problem.

Another aspect of culmination which impacted on the IDF was recovering from the losses of equipment and supplies during the early days of the war. While the Egyptians coordinated resupply through the Soviet Union and others, the IDF coordinated resupply from the United States once hostilities commenced. Had the war continued much past the 24th of October, the IDF may have had some difficulties in maintaining a combat ready force. Captured Egyptian equipment as well as an effective Israeli repair system accounted for keeping the active force equipped.

Finally, as MG Adan discusses, the IDF had a serious problem replacing lost tank crews. Nearly half of the IDF's losses occurred in the

armored corps, thus a serious problem ensued in trying to train new crews quickly during the cease-fire period when the force was dispersed throughout the Sinai. 168

Mass and concentration played a very important role in this campaign. A conclusion to draw from this experience is that quality is as important as quantity. Additionally, the importance of air superiority to accomplishing the ground objectives is significant. The recently completed operations in Iraq and Kuwait would seem to bear out these conclusions.

### Offensive Action

Offensive action is also a distinct characteristic of this campaign. By launching a crossing of the Suez Canal and attacking to encircle the Egyptian Third Army, the IDF was attempting to regain the initiative lost during the opening days of the war.

MG Sharon realized as early as the 7th of October that a crossing of the canal was necessary. Considerable discussion seems to have taken

place between 8 - 12 October over where exactly the crossing would occur. Options ranged from Port Said to Suez City. Based on reconnaissance information, Southern Command selected the area north of Great Bitter Lake (Matzmed) because it represented a weakly defended boundary between the Second and Third Egyptian Armies. Anticipating the canal crossing smoothed the transition from defense to offense.

Anticipation at the strategic level also accounted for Israeli success. During the War of Attrition (1967-73) with the Arabs, the Israeli's realized that if attacked by Egypt it may be necessary to attack back across the canal to defeat the invaders. To facilitate this they began acquiring bridging assets that would support assaults and crossing of large forces.

The Israeli's gained the initiative through the use of airpower. Once the campaign in the Golan Heights was over, they shifted IAF assets to the Sinai Theater of Operations where they neutralized the Egyptian air defense and missile systems. Once accomplished, the IAF could attack with relative impunity at Egyptian forces on both banks of the Suez Canal. Israeli air superiority allowed IDF freedom of action on the ground once

they crossed the canal by preventing Egyptian ground and air forces from interrupting movement.

During the exploitation phase of the operation, IDF forces maintained their initiative by taking advantage of the slow reacting Egyptians. By speedily moving across the canal and expanding the bridgehead, the IDF prevented the Egyptian forces from effectively interdicting them.

At the operational level the event which clearly set the terms for tactical exploitation was the establishment of a large scale bridging operation over the Suez Canal. Once this was in place, early on 18 October, IDF divisions were able to exploit in all directions to accomplish operational objectives. In order to accomplish this it was necessary for the Israeli Southern Command to concentrate and sequence forces and assets across the canal in a manner that allowed quick and decisive exploitation.

As already mentioned, the overwhelming superiority of the IAF and the slow reaction of Egyptian forces allowed the Israeli's to maintain freedom of action. Supporting operations, like diversionary and holding attacks against Egyptian forces on the west bank and attacks to prevent

Second Army from reinforcing on the east bank, contributed to constraining Egyptian actions. The destruction of the Egyptian air defense umbrella was a critical aspect in the encirclement of Third Army.

Finally, in taking offensive action, the IDF was able to create a high degree of leverage against the Egyptian Third Army. With holding attacks against flanking Egyptian forces, IAF air superiority, and large IDF forces moving quickly behind them, the Third Army had no option but to attempt a breakthrough back across the canal. Adan, however, defeated these attempts resulting in the encirclement of Third Army.

Through offensive action, the Israeli's were able to turn a complete surprise attack by the Egyptians into a successful military campaign that, with the exception of capturing Suez City, accomplished their operational objectives. This offensive action included quickly seizing the initiative in the air and on the ground, setting terms for tactical success, constraining the Egyptian ability to react, and applying leverage against the mass of Egyptian forces.

## CHAPTER 4 ENDNOTES

- 1 Young, Peter, ed., Atlas of the Second World War, (New York: G. Putnam, 1979), 203.
- 2 Young, Atlas of the Second World War, 200.
- 3 von Manstein, Erich, Lost Victories, Anthony B. Powell editor and translator, (Novato: Presidio, 1982), 368.
- 4 Manstein, Lost Victories, 371.
- 5 Young, Atlas of the Second World War, 194.
- 6 Manstein, Lost Victories, 367.
- 7 Young, Atlas of the Second World War, 203.
- 8 Manstein, Lost Victories, 370.
- 9 Ziemke, Earl F., The Soviet Juggernaut, Time-Life Books World War II Series, (Alexandria: Time-Life Books, 1981), 55.
- 10 Ziemke, Earl F., Stalingrad to Berlin: The German Defeat in the East, Army Historical Series, (Washington D. C.: GPO, 1968), 93.
- 11 Ziemke, The Soviet Juggernaut, 55.
- 12 Mellenthin, F. W., Panzer Battles: A Study in Employment of Armor in World War II, (New York: Ballantine, 1984), 253.
- 13 Figure 11 reprinted with special permission by USACGSC. Original publication in Ziemke, Stalingrad to Berlin, 67.



- 14 Mellenthin, Panzer Battles, 250.
- 15 Mellenthin, Panzer Battles, 251.
- 16 Ziemke, Stalingrad to Berlin, 85.
- 17 Ziemke, Stalingrad to Berlin, 85.
- 18 Ziemke, Stalingrad to Berlin, 88.
- 19 Griess, Thomas E., ed., Atlas for the Second World War: Europe and the Mediterranean, (Wayne: Avery, 1990), map 25.
- 20 Manstein, Lost Victories, 424.
- 21 Manstein, Lost Victories, 428.
- 22 Manstein, Lost Victories, 433.
- 23 Figure 12 reprinted with special permission by USACGSC.  
Original publication in Ziemke, Stalingrad to Berlin, 83.
- 24 Manstein, Lost Victories, 432.
- 25 Ziemke, Stalingrad to Berlin, 96.
- 26 Ziemke, Stalingrad to Berlin, 96.
- 27 Figure 13 reprinted with special permission by USACGSC.  
Original publication in Ziemke, Stalingrad to Berlin, 95.
- 28 Ziemke, Stalingrad to Berlin, 96.

29 Tatum, W. H., and E. J. Hoffschmidt, eds., The Rise and Fall of the German Air Force, (Old Greenwich: WE Inc., 1969), 228.

30 Tatum and Hoffschmidt, The Rise and Fall of the German Air Force, 228-9.

31 Tatum and Hoffschmidt, The Rise and Fall of the German Air Force, 231.

32 Tatum and Hoffschmidt, The Rise and Fall of the German Air Force, 231.

33 Manstein, Lost Victories, 438.

34 Tatum and Hoffschmidt, The Rise and Fall of the German Air Force, 225.

35 Ziemke, Stalingrad to Berlin, 91.

36 Ziemke, Stalingrad to Berlin, 91.

37 Mellenthin, Panzer Battles, 254.

38 Ziemke, Stalingrad to Berlin, 124.

39 Ziemke, Stalingrad to Berlin, 124.

40 Ziemke, Stalingrad to Berlin, 124-6.

41 Ziemke, Stalingrad to Berlin, 132-3.

42 Ziemke, Stalingrad to Berlin, 133-4.

43 Erickson, John, "Kursk," Decisive Battles of the Twentieth Century, edited by Noble Frankland and Christopher Dowling, (New York: David McKay Co., 1976), 223-38. Reproduced in CGSC P671 Syllabus, The Evolution of Modern Warfare, 61-69. Page references are to reproduction source. This endnote quoted material on page 64 of P671 syllabus.

44 Ziemke, Stalingrad to Berlin, 131.

45 Mellenthin, Panzer Battles, 263.

46 Erickson, Kursk, 65.

47 Erickson, Kursk, 65. The figure on 600 fighter aircraft comes from Tatum and Hoffschmidt, The Rise and Fall of the German Air Force, 234.

48 Erickson, Kursk, 65.

49 Ziemke, Stalingrad to Berlin, 135.

50 Mellenthin, Panzer Battles, 265.

51 This map produced by me based on data published by Young, Atlas of the Second World War, 204.

52 Ziemke, Stalingrad to Berlin, 129-30.

53 Ziemke, Stalingrad to Berlin, 136.

54 This map produced by me based on data published by Young, Atlas of the Second World War, 205.

55 Ziemke, Stalingrad to Berlin, 135-6.

- 56 Ziemke, Stalingrad to Berlin, 136.
- 57 Ziemke, Stalingrad to Berlin, 136.
- 58 Ziemke, Stalingrad to Berlin, 136-7.
- 59 Ziemke, Stalingrad to Berlin, 137-8.
- 60 Tantom and Hoffschmidt, The Rise and Fall of the German Air Force, 233.
- 61 Tantom and Hoffschmidt, The Rise and Fall of the German Air Force, 234-5.
- 62 Tantom and Hoffschmidt, The Rise and fall of the German Air Force, 235.
- 63 Tantom and Hoffschmidt, The Rise and Fall of the German Air Force, 235.
- 64 Tantom and Hoffschmidt, The Rise and fall of the German Air Force, 235.
- 65 Tantom and Hoffschmidt, The Rise and Fall of the German Air Force, 234.
- 66 Ziemke, Stalingrad to Berlin, 136-7.
- 67 Tantom and Hoffschmidt, The Rise and fall of the German Air Force, 233-4.
- 68 Ziemke, Stalingrad to Berlin, 136.
- 69 Ziemke, Stalingrad to Berlin, 131.

70 Ziemke, Stalingrad to Berlin, 130.

71 Appleman, Roy Edgar, South to Naktong, North to the Yalu, United States Army in the Korean War Series, (Washington D. C.: GPO, 1961), 252.

72 United States Military Academy, Department of Military Art and Engineering, Operations in Korea, (West Point: AG Printing Office, 1953), 16.

73 This statement of the strategic objective is summarized from readings in the following sources:

Appleman, South to Naktong, 46

United States Military Academy, Dept of History, Confrontation in Asia: The Korean War, (West Point: GPO, 1979), 75.

Summers, Harry G., On Strategy: The Vietnam War in Context, (Carlisle Barracks: GPO, 1982), 40-1.

In class discussions during CGSC course P671, Evolution of Modern Warfare, 26 March 1991.

74 Ridgway, Matthew B., The Korean War, (Garden City, NJ: Doubleday and Co., 1967), 39.

75 Heintz, Robert Debs Jr., Victory at High Tide: The Inchon-Seoul Campaign, (Washington D. C.: Nautical and Aviation Publishing Co., 1979),

76 Clayton, James D., The Years of MacArthur, Vol III (1945-1964), (Boston: Houghton Mifflin Co., 1985), 469.

77 Appleman, South to Naktong, 19.

78 Information from this paragraph is summarized from the following sources:

Appleman, South to Naktong, 503.

Department of the Army, Office of the Chief of Military History, Korea - 1950, (Washington D. C.: GPO, 1952), 147-8.

Montross, Lynn and Nicholas A. Canzona, The Inchon-Seoul Operation, vol 2 in US Marine Operations in Korea, (Washington, D. C.: GPO, 1955), 70. Republished by Scholarly Press, Grosse Point MI, 1976.

79 Data on UN forces taken from USMA, Confrontation in Asia, map 5.

80 Data on NKPA forces summarized from Appleman, South to Naktong, 500, 506.

81 Information on NKPA reinforcements summarized from Appleman, South to Naktong, 500.

82 Appleman, South to Naktong, 498.

83 Appleman, South to Naktong, 498.

84 Appleman, South to Naktong, 499.

85 Data on task organization, tasks, and objective area description summarized from Appleman, South to Naktong, 497.

86 Plan summarized from USMA, Operations in Korea, 18.

87 DA, Korea 1950, 149.

88 Appleman, South to Naktong, 543.

89 Appleman, South to Naktong, 543.

90 DA, Korea 1950, 149.

91 Data on deception activities summarized from Appleman, South to Naktong, 500; and, USMA, Confrontation in Asia, map 5.

92 Appleman, South to Naktong, 502-3.

93 Appleman, South to Naktong, 505-6.

94 This paragraph is summarized from information contained in Appleman, South to Naktong, 506-8.

95 Figure 16 reprinted with special permission by USACGSC. Originally published in USMA, Operations in Korea, map 6a.

96 Appleman, South to Naktong, 509.

97 Appleman, South to Naktong, 511.

98 USMA, Operations in Korea, 18.

99 Appleman, South to Naktong, 536.

100 Appleman, South to Naktong, 532.

101 Appleman, South to Naktong, 538-9.

102 Appleman, South to Naktong, 572.

103 Appleman, South to Naktong, 573.

104 Appleman, South to Naktong, 597.

105 Figure 17 reprinted with special permission by USACGSC.  
Originally published in USMA, Operations in Korea, map 5.

106 Montross and Canzona, The Incheon-Seoul Operation, 67.

107 Montross and Canzona, The Incheon-Seoul Operation, 67.

108 Montross and Canzona, The Incheon-Seoul Operation, 69.

109 Montross and Canzona, The Seoul-Incheon Operation, 103.

110 Montross and Canzona, The Seoul-Incheon Operation, 85.

111 Montross and Canzona, The Seoul-Incheon Operation, 102.

112 Appleman, South to Naktong, 604.

113 Appleman, South to Naktong, 454.

114 Appleman, South to Naktong, 492.

115 Appleman, South to Naktong, 496.

116 Appleman, South to Naktong, 496-7.

117 Appleman, South to Naktong, 493.

118 Appleman, South to Naktong, 494.



- 119 Appleman, South to Naktong, 493.
- 120 Appleman, South to Naktong, 493.
- 121 Appleman, South to Naktong, 571-2.
- 122 Appleman, South to Naktong, 502.
- 123 Appleman, South to Naktong, 489.
- 124 Appleman, South to Naktong, 494.
- 125 Department of the Army, Command and General Staff College, Selected Readings in Tactics: The 1973 Middle East War, USACGSC Reference Book 100-2, Volume 1, (Ft Leavenworth: GPO, 1980), 1-4.
- 126 CGSC, 1973 Middle East War, 1-5.
- 127 CGSC, 1973 Middle East War, 4-8.
- 128 CGSC, 1973 Middle East War, 4-8.
- 129 CGSC, 1973 Middle East War, 4-10.
- 130 CGSC, 1973 Middle East War, 4-11.
- 131 Herzog, Chaim, The War of Atonement: October 1973, (Boston: Little, Brown and Company, 1975), 276.
- 132 This map produced by me based on data published by Avraham Adan, On the Banks of the Suez, (San Francisco: Presidio Press, 1980), ii.

133 Adan, On the Banks of the Suez, 255 and 265. This endnote includes description of Egyptian positions as discussed in the endnoted paragraph as well as the paragraph which precedes it.

134 Adan, On the Banks of the Suez, 251.

135 Adan, On the Banks of the Suez, 253.

136 Adan, On the Banks of the Suez, 252. This endnote includes quote and summarization paragraph.

137 Adan, On the Banks of the Suez, 252 - 3.

138 This information came from the organizational structure information contained on the inside cover of Adan, On the Banks of the Suez.

139 CGSC, 1973 Middle East War, 5-11 to 5-12.

140 CGSC, 1973 Middle East War, 5-12.

141 CGSC, 1973 Middle East War, 5-12

142 CGSC, 1973 Middle East War, 5-20.

143 CGSC, 1973 Middle East War, 4-12.

144 CGSC, 1973 Middle East War, 4-13.

145 Figure 19 reprinted with special permission by USACGSC. Originally published in CGSC, 1973 Middle East War, Map XVI, C-4.

146 Adan, On the Banks of the Suez, 254.

147 Adan, On the Banks of the Suez, 254.

148 CGSC, 1973 Middle East War, 4-13.

149 CGSC, 1973 Middle East War, 4-13.

150 CGSC, 1973 Middle East War, 4-14.

151 CGSC, 1973 Middle East War, 4-14.

152 CGSC, 1973 Middle East War, 4-15.

153 CGSC, 1973 Middle East War, 4-15.

154 CGSC, 1973 Middle East War, 4-15.

155 CGSC, 1973 Middle East War, 4-15.

156 CGSC, 1973 Middle East War, 4-16.

157 CGSC, 1973 Middle East War, 4-16.

158 Figure 20 reprinted with special permission by USACGSC.  
Originally published in CGSC, 1973 Middle East War, Map XVIII, C-2.

159 Herzog, Chiam, The Arab-Israeli Wars: War and Peace in the Middle east from the War of Indepedence Through Lebanon, (New York: Vintage Books, 1984), 311.

160 Herzog, The Arab-Israeli Wars, 310.

161 Herzog, The Arab-Israeli Wars, 310-11.

162 CGSC, 1973 Middle East War, 4-17.

163 Shazly, Saad el, The Crossing of the Suez, (San Francisco: American Mideast Research, 1980), 314 - 19. This endnote summarizes information contained in sketches on the indicated pages.

164 Shazly, The Crossing of the Suez, 314 - 19. Again, this endnote summarizes information contained in sketches on the indicated pages.

165 Adan, On the Banks of the Suez, 436.

166 Adan, On the Banks of the Suez, 262.

167 CGSC, 1973 Middle East War, 5-11.

168 Adan, On the Banks of the Suez, 443.

## CHAPTER 5

### CONCLUSIONS, SUMMARY, AND GENERALIZATIONS

"If the enemy is thrown off balance, he must not be given time to recover. Blow after blow must be struck in the same direction; the victor, in other words, must strike with all his strength, and not just against a fraction of the enemy's. Not by taking things the easy way - using superior strength to filch some province, preferring the security of the minor conquest to a major success - but by constantly seeking out his centre of power, by daring all to win all, will one really defeat the enemy."

Clausewitz

#### Chapter Overview

There are three purposes for this chapter. First, I will draw conclusions from the analysis of case studies. Second, I will summarize my answer to the research question. Third, I will discuss generalizations, resulting from my conclusions and summary, on future operational maneuver.

## Conclusions from Case Studies

Having evaluated four case studies in detail, I feel that collectively they confirm that mass and offensive action are two characteristics of successful operational maneuver. I also believe that the case studies reaffirm a number of points discussed in US Army doctrine. The method that I will use to demonstrate this will be through tables that compare and contrast the four case studies in terms of force comparison, generation of mass, and employment of offensive action. I will use the corollary concepts discussed in chapters 3 and 4 to contrast the case studies. I will identify specific events, actions, or activities in these tables which demonstrate how mass and offensive action contribute to successful operational maneuver

### Force Comparison

Figure 21 contrasts forces in each of the case studies. The main conclusion to draw from this comparison is that while *quantity* is

important it is not absolutely essential. *Quality* of mass, on the otherhand, can make-up for a lack in quantity.

	MANEUVER FORCE EXAMINED OPN'L CENTER OF GRAVITY	OPPOSING FORCE OPN'L CENTER OF GRAVITY	RELATIVE COMBAT RATIOS (FAVORED FORCE)
MANSTEIN'S COUNTER- OFFENSIVE	GERMAN ARMY GROUP SOUTH (ESP. FOURTH PANZER ARMY)	SOVIET SOUTHWEST FRONT	GRD 3:1 (SOVIET) AIR 1:1
CITADEL (KURSK)	GERMAN ARMY GROUP SOUTH AND NINTH ARMY (ESP ARMY GROUP SOUTH)	STEPPE FRONT RESERVE BACKING UP VORONEZH AND CENTRAL FRONT POSITIONS	GRD 4:1 (SOVIET) AIR 2:1 (SOVIET)
CHROMITE (INCHON)	US X CORPS	NKPA FORCES OCCUPYING PSNS ON THE PUSAN PERIMETER	GRD 10:1 (US) TOTAL AIR/NAVAL SUPERIORITY (US)
GAZELLE (ENCIRCLE- MENT OF THIRD ARMY)	IDF SOUTHERN COMMAND FORCES (ESP. ADAN DIVISION)	EGYPTIAN PSNS ON EAST SIDE OF SUEZ CANAL	GRD 3:1 (EGYPT) (INITIALLY), THEN UP TO 5:1 (IDF) IAF AIR SUPER- IORITY

Figure 21, Force Comparison

Manstein's counteroffensive and Operation Gazelle demonstrate that concentration at decisive locations can overcome an initial lack in

quantity. Quality leadership, training, and execution often adds more to generation of combat power than additional weapon systems. The important aspect to grasp is that the operational commander must focus his mass where it will accomplish the greatest with respect to his objectives. The fact that one side has a numerical advantage does not automatically guarantee the creation of operational maneuver. The numerically inferior leader is more dependent on economy, risk, deception, and mobility to get his available mass to the right time and place.

Operation Desert Storm, like the 1973 Arab-Israeli War, will undoubtedly cause a watershed of discussion over the role of high technology weapons and their impact on modern operations. The effect of precision bombs and missiles, fire and forget weapons, satellite technology and evolving "brilliant" technologies will have a definite impact on how operational commanders achieve a maneuver advantage.



## Application of Mass

Figure 22 summarizes the application of mass in each of the case studies. There are a number of conclusions to draw from this data. For the most part, Doctrine discusses each of these conclusions. Three areas require further attention. They are surprise, mobility, and distribution of forces.

Common to each of the three successful instances of operational maneuver (Manstein's C/O, Chromite, and Gazelle) was simultaneous use of economy, risk, and deception. The one operation that failed, at least from the German standpoint, did not involve, to a great degree, any of these items. Corollary to economy, risk, and deception is gaining surprise. If there is a concept in our doctrine which requires further illumination it is probably surprise. While discussed as a principle of war, FM 100-5, Operations, does not expand on this subject to emphasize its importance in warfighting. In at least two case studies, the exploitation of surprise accounted for broad success. Manstein's ability to conceal his intent to strike at the penetrating Soviet rear gained surprise. Likewise, MacArthur's

stroke at Inchon gained surprise that facilitated the complete rout of the NKPA.

In concert with surprise, each of the successful case studies applied concentration at an unexpected location or at a location where the enemy was weak or vulnerable. Operation Citadel failed largely because the Germans attempted to attack at Soviet strengths.

The case studies emphasize the important role played by mobility and operational movement. Manstein's successful counterstroke was due largely to his ability to move his forces from untenable positions in the Caucasus to more favorable locations between the Donets and Dnieper Rivers. Amphibious doctrine and equipment provided MacArthur with the ability to move forces to Inchon. The role of naval and air assets in creating opportunities for movement is very important. As discussed earlier in chapter three, mobility involves both tangible and intangible factors. Tangible factors include flexible organizations, agile equipment, routes, transportation means, synchronized fire support, sustainment, and timely intelligence. Intangible factors include willing leadership, anticipation, and mental flexibility. Mobility is an important component of

movement and maneuver. Mobility cannot be thought of as purely a physical attribute. It is as much, or more, based on the intellectual abilities of operational commanders. Mobility is another area where our doctrine could afford further illumination.

Each of the case studies involved distribution of forces on converging lines of operation. The most successful instance of this occurred during Operation Chromite with distribution of forces between Pusan Perimeter and Inchon. The combined effect of simultaneously positioning forces at these two locations caused collapse of the NKPA center of gravity. Like surprise and mobility, force distribution requires additional emphasis in our doctrine.

Finally, in accordance with the tenets of AirLand Battle, each instance of successful operational maneuver involved operations in the depth of the enemy formations. Gazelle is a good example of this. Israeli air and ground raids against the Egyptian air defense system and maneuver of large IDF units, supported by close air, to the rear of Egyptian forces accounted for the establishment of leverage.

	ECONOMY OF FORCE RISK DECEPTION	APPLICATION OF MASS WITH RESPECT TO ENEMY OPN'L COG	USE OF MOVEMENT AND MOBILITY	DISTRIBUTION OF FORCES	APPLICATION OF MASS WITH RESPECT TO OPN'L DEPTH
MANSTEIN'S COUNTER - OFFENSIVE	-ECONOMY ON FLANKS -RISKED MAJOR SOVIET PENETRATION -ALLOWED SW FRONT TO PERCEIVE SUCCESS AND DRIVE FOR DNEIPER RIVER	-MASS FELL ON REAR FORMATIONS OF SW FRONT	-EXTENSIVE MVMT TO CREATE FAVOR- ABLE CONDITIONS -ANTICIPATED MVMT	-DISTR FORCES BTW HOLDING PSNS TO SHAPE THE SOVIET PENETRATION AND COUNTERSTROKE AT HIS DEPTH FORM- ATIONS	-MASS APPLIED AT DEPTH OF SW FRONT FORMATION
CITADEL (KURSK)	-ECONOMY ACCEPTED IN AG CENTRE AREA	-MASS APPLIED AGST STRONGLY PREPARED DEFENSE IN DEPTH	-STRENGTH OF SOVIET POSITIONS SLOWED MOBILITY AND SYNCH OF GERMAN ATTACK	-DISTR FORCES AGST FLANKS AND FRONT OF SOVIET SALIENT -INSUFFICIENT FORCES TO SUSTAIN OPERATIONS	-MASS FELL FORWARD OF SOVIET OPNL RESERVES
CHURCHILL (INCHON)	-ECONOMY ACCEPTED BY HOLDING PUSAN -UNEXPECTED LAND- ING SITE -HUSBANDING RESOURCES -FAKE AMPHIB LAND.	-MASS FELL ON LOC'S OF NKPA -GAINED PSYCHO- LOGICAL VICTORY BY CAPTURING SEOUL	-AMPHIB CAPABILITY PROVIDED MEANS TO GET FORCES AND RE- SOURCES TO DECISIVE LOCATION	-DISTR BTW PUSAN AND MAIN LANDING AT INCHON -EXTENSIVE USE OF AIR ASSETS	-DEPTH OF MASS APPLICATION TURNED NKPA OUT OF PSNS
GAZELLE (ENCIRCLE- MENT OF THIRD ARMY)	-ECONOMY AGAINST FORCES ON EAST BANK -DIVERSION USED TO DRAW ATTN AWAY FROM CROSSING SITE	-MASS FELL ON BDRY BTW TWO ARMIES -PIECEMEAL EF- FORT GETTING ACROSS THE CANAL	-SIGNIFICANT DELAYS CAUSED BY: * LACK OF INF * POOR MVMT CTRL * LIMITED ROUTES	-DISTRIBUTED FORCES BTW HOLDING AC- TIONS AND CROSSING FORCES	-MASS ACHIEVED SUFFICIENT DEPTH TO ENCIRCLE THIRD ARMY

Figure 22, Application of Mass

Leverage subsequently made the Egyptian center of gravity position untenable. In the instance of Operation Citadel, failure of the Germans to penetrate to any operational depth, failed to establish any conditions which jeopardized the Soviet center of gravity.

### Use of Offensive Action

Figure 23 summarizes offensive action in each case study. Current doctrine supports, for the large part, these conclusions.

Most obvious from the case study discussions, and from figure 23, is that the successful instances of operational maneuver all involved an anticipated need for the operation by the overall commander. The single instance of failure, Kursk, involved unclear objectives and an equally unclear expectation that the operation would accomplish something operationally worthwhile. Each of the other cases involved an anticipated outcome needed to accomplish a strategic objective.

\* Manstein's counteroffensive - Manstein anticipated the move from the Caucasus and the strike against the penetrating Soviet forces in order to re-establish positions on the Donets River

\* Inchon landing - MacArthur anticipated the need for a landing deep in the NKPA rear in order to relieve pressure on the Pusan Perimeter.

\* Sinai campaign - The Israeli's needed the Suez crossing and encirclement of Egyptian forces on the east bank in order to secure favorable conditions for negotiation during the approaching cease-fire.

Offensive action creates conditions for tactical exploitation. Operation Chromite clearly shows this. By striking offensively at Inchon, GEN MacArthur created conditions that allowed exploitation from both Inchon and the Pusan Perimeter.

	INITIATIVE ANTICIPATION FLEXIBILITY	SETS TERMS FOR TACTICAL EXPLOITATION	CONSTRAINS ENEMY ACTIONS	CREATES LEVERAGE	APPLIED OFFENSIVE CAPABILITY OF OTHER SERVICES
MANSTEIN'S COUNTER- OFFENSIVE	-ANTICIPATED NEED AND TOOK STEPS TO CREATE CONDITIONS -MAINTAINED INITIA- TIVE THROUGHOUT	-FIVMIT FROM CAUCA- SUS AND PSNS WEST OF THE DON RIVER CREATED CONDITIONS FOR EXPLOITATION	-CONSTRAINED SOVI- ETS BY: *HOLDING SHLDERS *SPEED AND SUR- PRISE *PRESSING ATK TO KHARKOV/DONETS	-LEVERAGE CREATED AGST LEAD ELEMENTS OF SW FRONT	-AIR SUPERIORITY IN AREAS OVER MAJOR GROUND ADVANCE -EXCELLENT COORD BE- TWEEN GROUND AND AIR FORCES
CITADEL (KURSK)	-INITIATIVE LOST BY WAITING UNTIL JULY -SOVIETS ANTICIPA- TED GERMAN ATK	-LIMITED TACTICAL SUCCESS IN SOUTH -INSUFFICIENT RESERVES	-DID NOT PREVENT SOVIET PREP OF PSNS	-LEVERAGE NOT CREATED	-COULD NOT ACHIEVE AIR SUPERIORITY FOR EVEN LIMITED PERIODS -PIECEMEAL AIR EFFORT IN RESPONSE TO SOVIET OFFENSIVES
CHIRKITE (INCHON)	-ANTICIPATED NEED AND TOOK STEPS TO CREATE CONDITIONS	-CREATED CONDITIONS THAT ALLOWED: *SEVERING LOCOS *CAPTURING SEOUL *EXPLOITING TO MANCHURIA *PUSAN BREAKOUT	-CONSTRAINED NKPA BY: *AIR POWER *BOLDNESS OF ACTION *SIMULTANEOUS PUSAN BREAKOUT	-LEVERAGE CREATED AGST NKPA MAIN FORCES AT PUSAN PERIMETER	-AIR AND NAVAL ASSETS USED TO ISOLATE AND DE- STROY ENEMY TGTS IN CBJ AREA
GAZELLE (ENCIRCLE- MENT OF THIRD ARMY)	-ANTICIPATED NEED AND TOOK STEPS TO CREATE CONDITIONS -REGAINED INITIATIVE WITH CROSSING	-ALLOWED EXPLOITA- TION TO ENCIRCLE THIRD ARMY	-CONSTRAINED EGYPTIANS BY: *AIR SUPERIORITY *HOLDING ATKs *DEFEATING C/ATKS	-LEVERAGE AGST THIRD ARMY	-AIR ASSETS DE- TROYED EGYPTIAN AIR DEFENSE UMBREL- LA -AIR AND GROUND FORCES CLOSELY COORDINATED

Figure 23, Use of Offensive Action

As figure 23 suggests, successful examples of operational maneuver facilitate friendly freedom of action by constraint of enemy activities. Kursk provides an excellent inverse example of this. The failure of the Luftwaffe to disrupt movement of Soviet reserve forces and gain local air superiority for advancing ground forces drastically limited freedom of action for German commanders. Successful operational maneuver requires air and ground forces constrain enemy activities in order to exploit a positional advantage.

I discussed leverage in some detail in the previous section. Offensive action is imperative for leverage. It provides the momentum and speed that allows leverage to unhinge the enemy center of gravity. The IDF drive toward Suez City is a good example of this. By not letting up on offensive pressure, the Israelis were able to seize significant terrain and destroy large portions of the Egyptian force prior to the cease-fire.

Finally, and perhaps most important, successful operational maneuver requires close coordination between ground, air, and (when appropriate) naval assets. This is very clear from the eastern front case studies. At Kursk, the German's were unable to establish the close



relationship between ground and air assets they relied so heavily on in previous operations. Manstein's success in the Donets Basin, however, was largely due to concentrated air support and air superiority. The close cooperation between air and ground proved equally important in "Chromite" and "Gazelle." Of particular importance is the balance between air interdiction on deep targets and close support of ground forces.

### Summary

The purpose of this thesis was to answer the following research question: **What are the characteristics of successful operational maneuver?**

I arrived at the answer to this question at the conclusion of chapter three. Basically, **mass** and **offensive action** are the primary distinguishing characteristics of operational maneuver. These characteristics resulted from a thorough analysis of our current AirLand Battle doctrine in conjunction with analysis of case studies from WWII, Korea, and the 1973 Arab-Israeli War.

The analysis of AirLand Battle doctrine provided me the opportunity to examine in great detail exactly what our doctrine espoused about operational maneuver. Mass and offensive action resulted from established criteria which I felt would be incumbent in characteristics of operational maneuver.

Essentially, the two characteristics fit the criteria better than any others. Both characteristics are significant; that is, notable or valuable. The emphasis on concentration of effort and force is paramount in FM 100-5. Massing is the primary means through which commander's direct the elements of combat power against the enemy. Our doctrinal emphasis on initiative, speed, and aggressiveness shows the significance of offensive action. As FM 100-5 states in its opening paragraph on AirLand Battle Doctrine:

The object of all operations is to impose our will upon the enemy - to achieve our purposes. To do this we must throw the enemy off balance with a powerful blow from an unexpected direction, follow up rapidly to prevent his recovery and continue operations aggressively to achieve the higher commander's goals. The best results are obtained when blows are struck against critical units or areas whose loss will degrade the coherence of enemy operations in

depth, and thus most rapidly and economically accomplish the mission. From the enemy's point of view, these operations must be rapid, unpredictable, violent, and disorienting. The pace must be fast enough to prevent him from taking effective counteractions. <sup>1</sup>

In conjunction with being significant, the characteristics must be synergistic. This implies that within their own broad concepts they incorporate corollary concepts which contribute to their overall attainment.

For example, mass includes a number of corollary actions which are necessary if concentration is in fact going to occur. Mass requires economy of force, risk-taking, and deception. Economy of force and deception cause the enemy to dissipate his effort or facilitate the achievement of surprise. Risk-taking allows the commander to exploit opportunities and bring the effects of his massed force against the enemy at the decisive time and place. Concentration of forces and effects must occur against the enemy's center of gravity. To mass at any other location would be a waste of resources. In order to achieve mass, commanders must possess the capability to distribute forces through operational movement and mobility along lines of operation that put forces in the best locations from which

they can tactically exploit the situation at hand. The effects of mass occur throughout the depth of the enemy's formations. It does little good to concentrate where he is strongest, when exploitable locations exist on his flanks or in his rear. Air and naval assets provide significant assistance to enhance our capability to strike throughout the depth of the enemy's area of operations. Finally, mass considers the reaching of culminating points. Sufficient forces, assets, and resources must be available to ensure achieving the operational objective before the culminating point.

Like mass, offensive action has corollaries which contribute to its overall development. Most importantly, offensive action provides the vehicle by which operational commanders set the stage for tactical exploitation. Offensive action allows the operational commander to decide where and when decisive battle will occur. Offensive action attempts to constrain the activities of the enemy in order to maintain friendly freedom of action. Air and naval assets provide flexible assets for constraining the enemy. They isolate him from key areas; destroy his air defense, command, control, and intelligence architectures, and contribute to his physical and psychological defeat. Offensive action relies on the ability of the

operational commander to maintain initiative through anticipation and flexibility. Considered as a whole, offensive action serves as a lever against the enemy center of gravity. While some forces hold the enemy, others exploit their mobility to threaten the destruction or encirclement of the enemy center of gravity.

Both mass and offensive action closely support the definition of operational maneuver proposed in this thesis - that operational maneuver is the advantageous positioning of forces in relation to the enemy's operational center of gravity prior to or during combat. As discussed in the preceding paragraphs, both mass and offensive action orient on the enemy center of gravity. The end product of their application is disruption, destruction, or incapacitation.

The principles of war include and support both characteristics. They are fundamental truths which have regularly affected the outcome of conflicts. As the case studies demonstrate, mass and offensive action are enduring historical concepts. Their validity over time remains constant despite radical changes in ideas, environments, organizations, and technologies.

As a final summary comment, the detailed study of doctrine and the case studies analyzed in this thesis emphasize the clear validity of the principles of war in our doctrine. In every case study, their proper or improper application was readily apparent. Of the principles, however, I feel that mass and offensive are the most important. One could argue that objective ranked first. Certainly, without a clear and definable military objective, operations fail before they begin. However, as a result of our failure to clarify objectives in Vietnam, and especially as a result of success in pursuing totally clear military objectives in Desert Shield/Storm, I feel the principle of the objective is a precursor to applying the other principles. This suggests that at the operational level, applying the other principles (including mass and offensive action) occurs after identification of the objective.

The other six principles, while important in themselves, contribute significantly to the development of offensive action and mass. As such they are critical, indispensable, and complimentary components of mass and offensive.

## Generalizations

Having discussed the characteristics of successful operational maneuver (mass and offensive action) in detail in each of the preceding case studies, it is possible to make some generalizations for the future. There are an infinite amount of conclusions which I could discuss. Deception, logistics, and technology are a few such examples. Current doctrine, however, covers these topics. Therefore I will limit my comments to the following generalizations:

- \* The impact of political influence.
- \* The importance of quality leadership.

In addressing these generalizations I will use examples from the case studies and from open source information on Operation Desert Storm.

## Political Influence and Operational Maneuver

To quote Clausewitz, "... war was nothing but the continuation of policy by other means." <sup>2</sup> The relationship between political decisions and theater strategy and operational art is obvious. As national leaders, politicians [In the US case, this equates to the National Command Authority (NCA) consisting of the President and Secretary of Defense] are responsible for identifying the goals and objectives that military operations will accomplish. In establishing these objectives, they identify the parameters (e.g., areas, limitations, conditions for success ...) for military action and through the structure of military high command [JCS, in the case of the US] allocate resources that allow the field commander to accomplish his military objectives.

Of all the responsibilities that the political leader has, the most important is identifying strategic objectives. Once he identifies these objectives the political leader allows his military commanders to take action necessary to accomplish the objective.



The importance of political influence on operational maneuver is significant. Political decisions may impact in the following ways:

- \* limit the use of resources for offensive purposes.
- \* limit the strategic and subsequent operational movement of forces.
- \* limit the geographical areas for operations.
- \* establish limited goals or objectives.
- \* influence selection of targets and objectives.
- \* influence the development of operational concepts.

In two of the case studies, Manstein's counteroffensive and Operation Citadel (Kursk), interference on the part of Adolph Hitler [the national political leader and assumed military leader] led to disasters or near disasters for German forces.

Prior to Manstein's counteroffensive, Hitler's disastrous policy of not allowing his field commanders to yield terrain to gain better operational advantage led to the encirclement and destruction of the German Sixth Army at Stalingrad. Despite requests from his field commanders to allow Sixth Army to initiate a breakout or move to more advantageous

positions, Hitler delayed the decision to a point at which no amount of assistance from other German forces could reverse the fate of Sixth Army.

Hitler remarked to Mussolini in the summer of 1943 that:

His generals frequently recommended the sacrifice of one area or another in order to improve opportunities for operations. This was completely false; one must not cede the enemy an inch of captured terrain and must conduct the war as far as possible from the homeland. 3

When Hitler finally allowed Manstein to yield terrain in order to create an operational advantage over a large Soviet offensive effort, the Germans scored a major success. This action occurred during Manstein's winter counteroffensive in February-March 1943.

During Operation Citadel (Kursk), however, Hitler was guilty of both interfering with military operations and failing to identify a clear strategic objective for the operation. When he delayed the operation from April until July, against the advice of two Army Group commanders, his own staff at OKW, and his armament minister (Albert Speer), he forfeited the operational advantage gained by Manstein's counterstroke two months earlier. The delay

allowed the Soviets to reinforce their positions to an extent which prevented a quick and decisive German victory.

The plan prepared and approved by Hitler called for a double envelopment by German forces who would meet at Kursk. While there may have been a chance for success in April, by July, the attack pincers took the Germans through the most thoroughly prepared Soviet positions. When pressed by Manstein to allow a "backhand stroke," as conducted in early March 1943, Hitler refused again to allow the yielding of terrain.

The operational situation changed so significantly between April and July, that the original objective sought no longer had military value. Hitler's objective changed from one oriented on consolidating the German disposition in the east to one rooted in psychological achievements. Hitler failed, or did not understand, that objectives must be, "... defined, decisive, and attainable ...." <sup>4</sup> The results were predictably disastrous. The attack lacked sufficient force and strategic focus. Only brilliant generalship on the part of Manstein and Model prevented the wholesale destruction of all German forces.

"Operation Chromite," (Inchon) provides a somewhat different example of this. While initially opposing the proposed landing concept at Inchon, the JCS eventually deferred to GEN MacArthur, the theater commander, and allowed the operation to continue. If the JCS had prevailed over MacArthur and advised President Truman to conduct the operation at another location, of less operational depth or importance, they could have altered the course of the Korean War. This example speaks to the expertise of the on-site theater commander and the importance of his assessment of military requirements. In retrospect it was policy differences between the President and GEN MacArthur over conduct of the war that eventually resulted in the later's relief from command.

One only needs to read Harry Summers', On Strategy: The Vietnam War in Context, or Martin van Creveld's, Command in War, to recognize the devastating impact of poorly made political decisions on the course of the Vietnam War. The selection and approval of virtually all air and ground targets by President Johnson seriously affected the warfighting capabilities of commanders in the theater.

In contrast to the above examples there is some evidence, that in the 1973 Arab-Israeli War, decisions made by Israeli Prime Minister Golda Meir positively affected the conduct of military operations. This occurred despite the fact that her Minister of Defense, Moshe Dayan - a former IDF military figure of some stature, became overly involved in military operations. As Chaim Herzog recalls:

He spent a considerable amount of time in the front line, away from the nerve centre, frequently creating an air of pessimism around him and giving advice which, had it been taken, could have changed the course of the war and would have left Israel without the trump cards that proved to be so valuable in the disengagement negotiations. It is difficult to evaluate the logic behind his thinking, issuing a directive in May to prepare for war in late 1973 and then, in light of all the intelligence in the first week of October and on Yom Kippur morning, opposing the total mobilization demanded by the chief of staff, thus causing the loss of valuable hours of mobilization time. Dayan was repeatedly indecisive. On the morning of Yom Kippur he told Mrs Meir that he was 'against total mobilization but he would not resign'; he left the decision about the attack into Syria on Wednesday 10 October, to her; he declared that he would 'not make a jihad' against the crossing of the Suez Canal by the Israeli forces although he opposed it. Had his suggestion on the first day for withdrawal to the line of the passes in Sinai been accepted, the subsequent Israeli crossing of the Canal would have been impossible. He misread the political

developments, maintaining all through the war that there would be no cease fire. 5

The recent experience of US forces in Operation Desert Shield/Storm illustrates the advantage of allowing military commanders to conduct operational maneuver [without undue interference] within the scope of clear political and strategic objectives.

The President reiterated these goals in an address to the nation on January 16, 1991, the evening the air campaign started:

Our objectives are clear. Saddam Hussein's forces will leave Kuwait. The legitimate government will be restored to its rightful place and Kuwait will once again be free. Iraq will eventually comply with all relevant United Nations resolutions and then when peace is restored, it is our hope that Iraq will live as a peaceful and cooperative member of the family of nations, thus enhancing the security and stability of the Gulf. 6

GEN Schwarzkopf, as the theater commander, was able to develop and execute detailed operational plans that allowed for the accomplishment of these strategic objectives.

As added support to his military commanders, President Bush promised that the Persian Gulf War would be "no Vietnam." The President stated, "Our men and women will not be asked to fight with one hand tied behind their backs." 7

Cabinet level political influence provided significant assistance to GEN Schwartzkopf. A primary example of this was the President, Secretary of State, and Secretary of Defense securing basing rights in Saudi Arabia and other nations in the area. This allowed the CINC to distribute his forces in the best manner to accomplish his objectives. A second example of positive political influence was the development of the United Nations coalition. The availability of these forces and assets provided other resources with which the CINC could develop and execute his concept. It is apparent that other coalition forces played a key role in both the air and ground campaigns of Operation Desert Storm.

Operation Just Cause, while conducted under somewhat different circumstances, followed the same pattern; clearly defined objectives

allowing the theater commander to develop a campaign plan to accomplish them.

There is an undeniable link between political goals and operational maneuver. The important aspect for future operations is that both political and military leaders must understand the mutually supporting roles of each other. Operation Desert Storm illustrated this concept clearly and effectively.

### Quality Leadership and Operational Maneuver

Quality leadership is nothing new in our army doctrine. FM 100-5 states that "[t]he most important element of combat power is competent and confident leadership. Leadership provides purpose, direction, and motivation in combat." <sup>8</sup> Leadership at the operational level will influence all aspects of operational maneuver. All progressive armed forces have sought to employ the best leaders against their enemies.



Manstein's counteroffensive demonstrates the influence of leadership. Against favorable Soviet ratios of 3:1 and greater, Manstein was able to apply superior leadership at the operational level and influence leadership at the tactical level to score a stunning victory.

Manstein states:

The reason why we succeeded, despite a series of crises, in mastering the tasks ... is that the army and army group staffs adhered to two well-established German principles of leadership:

- (i) Always conduct operations elastically and resourcefully.
- (ii) Give every possible scope to the initiative and self-sufficiency of commanders at all level. 9

In, Lost Victories, Manstein emphasizes the importance placed on "... the independent action of a subordinate commander in boldly exploiting some favorable situation at the decisive moment." He felt this principle accounted for the willingness to accept risks that result in substantive gains. 10

Two comments by MG F. W. von Mellinthin, Chief of Staff of the 48th Panzer Corps, add support to this discussion.

First, in discussing the success of Manstein's counteroffensive, von Mellinthin remarked:

The German military writer, Ritter von Schramm, spoke of "a miracle of the Donetz," but there was no miracle; victory was gained by masterly judgement and calculation. 11

Second, in addressing leadership, von Mellinthin remarked:

Field Marshal von Manstein proved in this operation that Russian mass attacks should be met by maneuver and not by rigid defense. The weakness of the Russian lies in his inability to face surprise; there he is most vulnerable. Manstein realized his weakness. He also realized that his own strength lay in the superior training of his junior commanders and their capacity for independent action and leadership. Thus he could afford to let his divisions withdraw for hundreds of miles, and then stage a smashing counterattack with the same divisions, which inflicted heavy blows on their startled and bewildered opponents. 12

As for his opponents, Manstein cites the inability of the Soviet command to coordinate both strength and speed at decisive points along with their failure to take bold risks as the reasons for their defeat. 13

Certainly German successes in WWII were due to the consistent and excellent training their officers received at the German General Staff School. Given the operational success scored in the Persian Gulf, our AirLand Battle doctrine, which advocates the principles discussed above seems to have required the US Army to acquire some of these qualities.

Another aspect of quality leadership is anticipatory skills for operational commanders. In achieving mass and offensive action, the operational commander sets the terms and conditions for tactical exploitation. Setting the terms and conditions at the right time and place requires anticipation. As figure 23 depicts, in the case studies I examined, the commander that anticipated the need for an initiative gaining operation scored a victory.

As is the case in history, successful commanders will need to anticipate operations on the future battlefield. This means they will be unable to rely solely on staff input to generate recommendations and instead will have to analyze and influence the action.

To paraphrase an earlier quote by COL L. D. Holder, operational maneuver is a contest of wills between opposing commanders. Each

attempts to use the tools at his disposal to create effects of operational maneuver. 14 There is extensive evidence that both Patton and Montgomery exhaustively studied Rommel to anticipate his actions.

Given the myriad of coordination needed for synchronization, anticipation is a key ingredient for success. Operational commanders and staffs must simultaneously employ fires, deception, movement, and maneuver against the enemy. They must exploit intelligence assets to anticipate what the enemy will do. His command and control structure must be flexible and efficient to allow timely action, reaction, or counteraction against the enemy. Finally, he must anticipate logistic needs to prevent untimely culmination of forces.

While it may be months or years before the official history of Desert Storm is complete, news and open press reports indicate that the anticipatory skills of GEN Schwarzkopf, his staff, and his subordinate commanders played a key role in synchronizing the overall campaign plan and achieving a quick and decisive victory.

## CHAPTER 5 ENDNOTES

1 Department of the Army, FM 100-5, Operations, (Washington D. C.: GPO, 1986), 14.

2 Howard, Michael, Clausewitz, (Oxford: Oxford University Press, 1983), 34.

3 Diechmann, D. Paul, German Air Force Operations in Support of the Army, USAF Historical Study no. 163, USAF Historical Division, Research Studies Institute, (Air University, June 1962), 170.

4 FM 100-5, Operations, 173.

5 Herzog, Chiam, The War of Atonement: October 1973, (Boston: Littke, Brown and Company, 1975), 280-1.

6 The Associated Press, "Bush Speech to Nation: 'Objectives are Clear'," The Kansas City Star, 17 January 1991, A1, AA1.

7 Ungar, Robert, "U.S. Strikes Iraq," The Kansas City Star, 17 January 1991, A1.

8 FM 100-5, Operations, 13.

9 von Manstein, Erich, Lost Victories, ed. and trans. by Anthony B. Powell, (Novato: Presidio, 1982), 382.

10 Manstein, Lost Victories, 382-3.

11 von Mellenthin, F. W., Panzer Battles: A Study In the Employment of Armor in World War II, (New York: Ballantine, 1984), 253.

12 Mellenthin, Panzer Battles, 254.

13 Manstein, Lost Victories, 383.

14 Holder, L. C., "A New Day for Operational Art," Army, (March 1985), 151.

## SELECTED BIBLIOGRAPHY

## Government Documents

The Joint Chiefs of Staff. JCS Pub 1-02, Department of Defense Dictionary of Military and Associated Terms. Washington D. C.: GPO, 1989.

\_\_\_\_\_ JCS Pub 3-0, Doctrine for Unified and Joint Operations (Test Pub). Washington, D. C.: GPO, 1990.

Department of the Army. FM 71-100, Division Operations. Washington, D.C.: GPO, 1990.

\_\_\_\_\_ FM 100-1, The Army. Washington D. C.: GPO, 1986.

\_\_\_\_\_ FM 100-5, Operations. Washington, D. C.: GPO, 1986.

\_\_\_\_\_ FM 100-6, Large Unit Operations (Coordinating Draft). Ft Leavenworth: GPO, 1987.

\_\_\_\_\_ FM 100-7, The Army in Theater Operations (Initial Draft). Washington, D. C.: GPO, 1990.

\_\_\_\_\_ FM 100-15, Corps Operations. Washington, D. C.: GPO, 1989.

\_\_\_\_\_ FM 101-5, Staff Organization and Operations. Washington, D. C.: GPO, 1984.

\_\_\_\_\_ FM 101-5-1, Operational Terms and Symbols. Washington, D. C.: GPO, 1985.

\_\_\_\_\_ Headquarters, United States Army Training and Doctrine Command (TRADOC). TRADOC Pamphlet 11-9, Blueprint of the Battlefield, Ft Monroe, Va.: GPO, 27 April 1990.



- \_\_\_\_\_. Office of Military History. Korea - 1950.  
Washington D. C.: GPO, 1952.
- \_\_\_\_\_. Army War College. Campaign Planning. Carlisle Barracks:  
USAWC Strategic Studies Institute, 1988.
- \_\_\_\_\_. Command and General Staff College. Larger Units: Theater Army  
- Army Group - Field Army. Combat Studies Institute Report no. 6.  
Ft Leavenworth: GPO, 1985.
- \_\_\_\_\_. Command and General Staff College. Selected  
Readings in Tactics: The 1973 Middle East War. USACGSC  
Reference Book 100-2, Volume 1. Ft Leavenworth: GPO, 1980.
- United States Military Academy, Dept of History. Confrontation in Asia:  
The Korean War. West Point: GPO, 1979.
- \_\_\_\_\_, Dept of Military Art and Engineering. Operations in Korea.  
West Point: AG Printing Office, 1952.
- Armed Forces Staff College. AFSC Pub 1, The Joint Staff Officers Guide.  
Washington, D.C.: GPO, 1988.
- Conference Report, House of Representatives Report 99-824, Goldwater-  
Nichols Department of Defense Reorganization Act of 1986,  
September 12, 1985. (Printed in FB050, Fundamentals of Joint and  
Combined Operations published by DJCO, USACGSC)

#### Periodicals and articles

- Atkeson, Edward B. "The Operational Level of War." Military Review.  
March 1987: 28-36.

- Bolt, William J. and David Jablonski. "Tactics and the Operational Level of War." Military Review. February 1987: 2-19.
- Cate, Paul E. "Large Unit Operational Doctrine." Military Review. December 1978: 40-47.
- Coroalles, Anthony M. "Maneuver to Win: A Realistic Alternative." Military Review. September 1981: 35-46.
- DePuy, William E. "Toward a Balanced Doctrine." Army. November 1984: 18-25.
- DeVries, Paul T. "Maneuver and the Operational Level of War." Military Review. February 1983: 13-34.
- Doerfel, John S. "The Operational Art of the Airland Battle." Military Review. May 1982: 3-10.
- Duffy, Brian. "The 100-Hour War." U.S. News and World Report. 11 March 1991, 10.
- Fitzgerald, F. N. "The Russo-German Battles - 1941-45 (Part One)." Military Review. September-October 1946: 62-67.
- \_\_\_\_\_. "The Russo-German Battles - 1941-45 (Part Two)." Military Review. November-December 1946: 20-24.
- Franz, Wallace P. "Grand Tactics." Military Review. December 1981: 32-39.
- \_\_\_\_\_. "Maneuver: The Dynamic Element of Combat Power." Military Review. May 1983: 2-12.
- \_\_\_\_\_. "Operational Concepts." Military Review. July 1984: 2-15.

Glantz, David M. "Operational Art and Tactics." Military Review.  
December 1988: 32-40.

Harned, Glenn M. "Principles for Modern Doctrine From Two Venerated  
Theorists." Army. April 1986: 10-14.

Holder, L. D. "Quality versus Quantity: Limits of Operational Art." Army.  
1986: 34-40.

\_\_\_\_\_ "A New Day for Operational Art." Army. March 1985: 146-153.

\_\_\_\_\_ "Maneuver In the Deep Battle." Military Review. May 1982:  
54-61.

\_\_\_\_\_ "Training for the Operational Level." Parameters. Spring  
1986: 7-13.

Howard, Michael. "The Forgotten Dimensions of Strategy." Foreign Affairs.  
Summer 1979: 975-86. Reproduced in CGSC P671 Term II and III  
Syllabus, The Evolution of Modern Warfare, 164-69.

Kindsvatter, Peter S. "Operational Maneuver: The Lessons of WWII." Army.  
August 1986: 46-49.

Lind, William S. "Military Doctrine, Force Structure, and the Defense  
Decisionmaking Process." Air University Review. May/June 1979:  
21-27.

\_\_\_\_\_ "Some Doctrinal Questions for the Department of the Army."  
Military Review. March 1977: 54-65.

\_\_\_\_\_ "Tactics in Maneuver Warfare." Marine Corps Gazette.  
September 1981: 36-39.

Luttwak, Edward N. "The American Style of Warfare and the Military  
Balance." Survival. January/February 1979: 57-60.

\_\_\_\_\_. "The Operational Level of War." International Security. Winter 1981: 61-79.

Luvaas, Jay. "Thinking at the Operational Level." Parameters. Spring 1986: 2-6.

Mendel, William W. "Theater Strategy and the Theater Campaign Plan: Both are Essential." Parameters. December 1988: 42-48.

Newell, Clayton R. "Balancing Ends, Ways, and Means." Army. August 1986: 29-35.

Roser, Stephen P. "New Ways of War: Understanding Military Innovation." International Security. Summer 1988: 134-88.

Schneider, James J. "The Loose Marble - and the Origins of Operational Art." Parameters. March 1989: 85-99.

Schneider, James J. and Izzo, Lawrence L. "Clausewitz's Elusive Center of Gravity." Parameters. September 1987: 46-57.

Shutler, Phillip D. "Thinking About Warfare." Marine Corps Gazette. November 1987: 18-26.

The Associated Press. "Bush Speech to Nation: 'Objectives are Clear'." The Kansas City Star. 17 January 1991, A1, AA3.

"The Battle of Kursk." Military Review. April 1948: 73-80. Translated and digested by the Military Review from an article in "Kungl. Krigsvetenskaps-Akademiens Handlingar och Tidskrift" (Sweden) No.6, 1947.

Ungar, Robert. "US Strikes Iraq." The Kansas City Star, 17 January 1991, A1.

Wass de Czege, Huba and Holder, L. D. "The New FM 100-5." Military Review. July 1982: 53-70.

### Unpublished Materials

Connors, Thomas P. "Deep Operations: Should We Fire or Maneuver?" SAMS Monograph. USACGSC, 1989.

Haith, Michael, E. "CINC-ronization (Synchronization): The Critical Tenet in Future Operational Art." SAMS Monograph. USACGSC, 1990.

Franz, Wallace P. "Large Unit Maneuver." Unpublished and undated document.

Janes, William H. "Operational Art in NATO: How Will Politically Motivated Restrictions Affect Operational Maneuver." SAMS Monograph. USACGSC, 1983.

Karis, Daniel G. "The Combat Support Role in Operational Movements: Another Step in Learning The Art of Operational Maneuver." SAMS Monograph. USACGSC, 1989.

Kindsvalter, Peter S. "An Appreciation for Moving the Heavy Corps - The First Step in Learning the Art of Operational Maneuver." SAMS Monograph. USACGSC, 1986.

Lynch, Timothy D. "Operational Synchronization: A Revised Doctrinal Prospective." SAMS Monograph. USACGSC, 1990.

Schneider, James J. "The Theory of Operational Art." SAMS Theoretical Paper No. 3, 1988.

Schroedel, Joseph. "The Art and Science of Operational Maneuver." SAMS Monograph. USACGSC, 1988.

Stewart, Gary M. "Protecting the Force: The Third Dimension of Operational Maneuver." SAMS Monograph. USACGSC, 1987.

Stuart, H. Paul. "Operational Maneuver: Creator of the Decisive Point." SAMS Monograph. USACGSC, 1987.

Tomlin, Harry A. "The Focus of the U. S. Army's Operational Art: A Question of Balance." SAMS Monograph. USACGSC, 1989.

#### Other sources

Adan, Avraham. On the Banks of the Suez. San Francisco: Presidio Press, 1980.

Addington, Larry H. The Patterns of War Since the Eighteenth Century. Bloomington: Indiana UP, 1984.

Appleman, Roy Edgar. South to Naktong, North to the Yalu. United States Army in the Korean War Series. Washington, D. C.: GPO, 1961.

Anders, Wladyslaw. Hitlers Defeat in Russia. Chicago: Henry Regnery Co, 1953.

Baxter, William. Soviet AirLand Battle Tactics. Novato, CA: Presidio Press, 1986.

Bekker, Cajus. The Luftwaffe War Diaries. Translated by Frank Ziegler. New York: Ballantine Books, 1969.

Clausewitz, Karl von. On War. Translated by O.J. Matthijs Jolles. Washington, D.C.: Infantry Journal Press, 1953.

Diechmann, D. Paul. German Air Force Operations in Support of the Army. USAF Historical Study no. 163. USAF Historical Division, Research Studies Institute, Air University. June 1962.

Douhet, Giulio. "The New Form of War." The Command of the Air. Translated by Dino Ferrari, edited by Richard H. Kohn and Joseph P. Harahan, 1942. Reprinted by Office of Air Force History, USAF, 1983. Reproduced in CGSC P671 Term II and III Syllabus, The Evolution of Modern Warfare, 7-22.

Erickson, John. "Kursk." Decisive Battles of the Twentieth Century. edited by Noble Frankland and Christopher Dowling. New York: David McKay Co., 1976, p. 223-38. Reproduced in CGSC P671 Term II and III Syllabus, The Evolution of Modern Warfare, 61-69.

Fugate, Bryan I. Operation Barbarossa. Novato: Presidio, 1984.

Gabel, Christopher R. The Lorraine Campaign: An Overview. September - December 1944. Combat Studies Institute Publication. Leavenworth: GPO, 1985.

Glantz, David M. August Storm: Soviet Tactical and Operational Combat in Manchuria, 1945. Leavenworth Papers. Leavenworth: GPO, 1983.

\_\_\_\_\_. Soviet Defensive Tactics at Kursk, July 1943. Combat Studies Institute Report no. 11. Ft Leavenworth: GPO, 1986.

Griess, Thomas E. The Second World War: Europe and the Mediterranean. Wayne N.J.: Avery Publishing Group, 1984.

\_\_\_\_\_. Atlas for the Second World War: Europe and the Mediterranean. Wayne, NJ: Avery Publishing Group, 1990.

Halperin, Morton H. "The Korean War: A Case Study." Limited War in the Nuclear Age. Westport, CT.: Greenwood Press, 1978, 39-57.  
Reproduced in CGSC P671 Term II and III Syllabus, The Evolution of Modern Warfare, 190-199.

Heintz, Robert Debs, Jr. Victory at High Tide: The Inchon-Seoul Campaign. New York: Nautical and Aviation Publishing, 1979.

Herzog, Chaim. The War of Atonement: October 1973. Boston: Little, Brown and Company, 1975.

\_\_\_\_\_. The Arab-Israeli Wars: War and Peace in the Middle East from the War of Independence through Lebanon. New York: Vintage Books, 1984.

Howard, Michael. Clausewitz. Oxford: Oxford University Press, 1983.

James, D. Clayton. The Years of MacArthur. Volume III (1945-1964). Boston: Houghton Mifflin Co., 1985.

Jomini, Antoine Henri. The Art of War. Ed. J.D. Hittle. Harrisburg: Telegraph Press, 1954.

Langley, Michael. Inchon Landing: MacArthur's Last Triumph. New York: Times Books, 1979.

Liddell Hart, B. H. Strategy. 2nd ed. New York: Praeger Publishers, 1982.

Livesey, Anthony. Great Battles of World War I. New York: MacMillan Publishing, 1989.

Luttwak, Edward N. Strategy. Cambridge: Harvard UP, 1987.



Lykke, Arthur F., Jr. "Toward an Understanding of Military Strategy."  
Military Strategy: Theory and Application (A USAWC reference  
text), June 1989. Reprinted in USACGSC ST 20-15, Joint and  
Combined Operations (Selected Readings), August 1990.

Manchester, William. American Caesar. Boston: Little, Brown and  
Company, 1978.

Montrose, Lynn and Nicholas A. Canzona. US Marine Operations in Korea.  
Vol. 1, The Pusan Perimeter. Washington, D. C.: GPO, 1954.  
Reprinted by Brandy Able 1, Austin, Texas, 1987.

\_\_\_\_\_. US Marine Operations in Korea. Vol. 2, The Incheon-Seoul  
Operation. Washington, D. C.: GPO, 1955. Reprinted by Scholarly  
Press, Grosse Point, Michigan, 1976.

Morris, William, ed. American Heritage Dictionary. New College Edition.  
Boston: Houghton Mifflin Company, 1976.

Nakteil, Richard. Atlas of World War II. New York: Military Press, 1985.

Piekalkiewicz, Janusz. Operation "Citadel" Kursk and Orel: The Greatest  
Tank battle of the Second World War. Novato: Presidio, 1987.

Ridgway, Matthew B. The Korean War. Garden City, NJ: Doubleday and Co.,  
1967.

Romjue, John L. From Active Defense to AirLand Battle: The Development  
of Army Doctrine 1973-1982. TRADOC Historical Monograph Series.  
Fort Monroe: GPO, 1984.

Rothenberg, Gunther E., "Moltke, Schlieffen, and the Doctrine of Strategic  
Envelopment." in Makers of Modern Strategy from Machiavelli to the  
Nuclear Age edited by Peter Paret. Princeton: Princeton  
University Press, 1986, 296-325.

- Rudel, Hans Ulrich. Stuka Pilot. Translated by Lynton Hudson. New York: Ballantine Books, 1973.
- Savkin, V. YE. The Basic Principles of Operational Art and Tactics. Translated by USAF. Washington, D. C.: GPO, 1972.
- Schwabedissen, D. Walter. The Russian Air Force In the Eyes of German Commanders. USAF Historical Study no. 175. USAF Historical Division, Research Studies Institute, Air University. June 1960.
- Shazly, Saad el. The Crossing of the Suez. San Francisco: American Mideast Research, 1980.
- Sidorenko, A. A. The Offensive: A Soviet View. Translated by USAF. Washington, D. C.: GPO, 1970.
- Simon, Julian L. Basic Research Methods In Social Science. New York: Random House, 1969.
- Simpkin, Richard E. Race to the Swift. Oxford: Brassey's, 1986.
- Strachan, Hew. European Armies and the Conduct of War. London: George Allen and Unwin Publishers, Ltd., 1983.
- Summers, Harry G. Jr. On Strategy: The Vietnam War in Context. Carlisle Barracks: GPO, 1982.
- Tantum, W. H., IV and E. J. Hoffschmidt, editors. The Rise and Fall of the German Air Force. Old Greenwich, Conn.: WE Inc, 1969.
- Turabian, Kate L. A Manual for Writers. Chicago: Univ of Chicago Press, 1987.
- Van Creveld, Martin. Command in War. Cambridge: Harvard University Press, 1985.

- Vigor, P. H. Soviet Blitzkrieg Theory. New York: St Martin's Press, 1983.
- von Manstein, Erich. Lost Victories. Edited and Translated by Anthony B. Powell. Novato: Presidio, 1982.
- von Mellenthin, F. W. Panzer Battles: A Study in the Employment of Armor in World War II. New York: Ballantine, 1984.
- Weigley, Russell F. The American Way of War. Bloomington: Indiana UP, 1977.
- Werth, Alexander. Russia at War: 1941-45. New York: E.P. Dutton, 1964.
- Willoughby, Charles Andrew. Maneuver in War. Harrisburg: Telegraph Press, 1939. Reprinted by the US Army War College for the Art of War Colloquium.
- Wray, Timothy A. Standing Fast: German Defensive Doctrine on the Russian Front During World War II. Combat Studies Institute Research Survey no. 5. Ft Leavenworth: GPO, 1986.
- Young, Peter, ed. Atlas of the Second World War. New York: G.P. Putnam, 1979.
- Ziemke, Earl F. Stalingrad to Berlin: The German Defeat in the East. Washington, D.C.: GPO, 1984.
- . The Soviet Juggernaut. Time-Life Books World War II Series. Alexandria, Va.: Time-Life Books, 1981.

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